



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, MAY 24, 1862.

OFFICIAL PAPERS.

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Government of Bengal.

Cotton Roads in Bengal.

From LIEUTENANT-COLONEL J. P. BEADLE, Officiating Secretary to the Government of Bengal, in the Public Works Department, to the Superintending Engineer of the Cuttack Circle,—(dated Fort William, the 29th April 1862.)

YOUR Reports, Nos. 536, dated the 7th instant,

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| 1. Sumbulpore to Chunderpore. | and 543, dated the 8th idem, on the |
| 2. Sohela to Chunderpore. | road named in |
| 3. Sohela to the Jonk River. | the margin, have |

been read by the Lieutenant-Governor with much interest, and I am instructed to thank you for them.

2. The Lieutenant-Governor approves of the 23rd paragraph of your first Report, which explains in detail how the road from Sumbulpore to Chunderpore, on the right bank of the Mahanuddy River, is to be formed, at a cost not exceeding Rupees 250 a mile.

3. Paragraphs 40 to 42 of the Report in question, which refer to the construction of the cross road from Sohela towards Chunderpore, are also approved.

4. Your Second Report, No. 543, treats of the high road to Nagpore, extending from Sohela to the Jonk River, and the Lieutenant-Governor entirely approves of your proceedings in connection with this road, as explained in paragraphs 38 to 44 of the Report.

5. Your proposals and the entire scheme for the construction and improvement of these roads appear to the Lieutenant-Governor to be well considered and well calculated to develop the traffic of the rich, but hitherto neglected Districts lying westward of Sumbulpore.

6. A copy of the two Reports, with the Map under acknowledgment, will be sent to the Chief Commissioner of the Central Provinces; they will also be published in the *Supplement to the Government Gazette* for general information.

CUTTACK CIRCLE.

Superintending Engineer's Memorandum on sanctioned roads.

SUMBULPORE to CHUNDERPORE.—With remarks on the *Sarungurh District*; and the construction of a road connecting Districts north and west of Chunderpore, with Sohela and Binkah, and so avoiding many miles of most intricate and dangerous navigation *via* the Mahanuddy.

NEW ROAD, SUMBULPORE to CHUNDERPORE.

(1.) The marches or stages on the line, Sumbulpore to Chunderpore, are as follows:—

	Miles.
Sumbulpore to Taug	... 12
Taug to Rampoluga	... 10
Rampoluga to Puddumpore	... 14
Puddumpore to Podigaun	... 12
Podigaun to Chunderpore	... 10
Total	... 58 miles.

(2.) The only difficult or very troublesome march, even as things existed at the time of my inspection, was the stage, Sumbulpore to Taug.

This march lies nearly all the way through thick jungle, and over a very rough and rocky soil; many nullahs, none of them large however, are crossed. All of these streams have rocky beds, and the crossings have been hitherto very difficult indeed. Seldom can laden carts get over these rocky banked and bedded nullahs. The carts are generally unloaded by one-half and so taken across the nullah, even then only with much trouble and

by the assistance of extra drivers and bullocks to push and pull the machine.

(3.) There are two tracks, Sumbulpore to Taug, one follows very closely the river bank, the other proceeds more inland. The latter is the line our new road will generally follow.

The track near the Mahanuddy is the most difficult, and would be largely the most expensive to convert into a bridged road, inasmuch as at the points it intersects the numerous streams noted above, they are wide and deep; jungle too is heavier. The river bank line is higher certainly, but as the Mahanuddy seldom, if ever, over-rides its maiden banks, between Taug and Sumbulpore, this advantage of the river bank route is of no special importance. The nullahs "die out" as they recede from the Mahanuddy, and where the inner route crosses them they are, with two exceptions, mere streams flowing through shallow channels and girthed by rocky banks affording them facilities for bridging, should the same be hereafter deemed necessary.

(4.) From Taug to Rampoluga, the route for the new road passes through a fine open country, very fairly cultivated, though by no means to the extent it might. The population seems thin here. The villages are small and the people few in number, all the way in fact to Puddumpore. The late unsettled state of Sumbulpore has caused this state of things to some degree; and many villages on this line have been, for the past three or four years, protected by resident guards of armed Police. Indeed, at "Rampoluga" one is stationed at present, and the village is surrounded and fortified by high palisades with raised "look-out" places at the entrance gates.

This state of affairs has naturally hindered improvements, and by every one I was told that many ryots had emigrated to "Rajah's countries," where peace existed, and where they could pursue their agricultural pursuits in quiet.

(5.) As the disturbances, that have existed since 1858 in the Sumbulpore District, are now quieting down, naturally the plough and spade will soon take the place of the tulwar and the bow and arrow. Prices for all kinds of agricultural produce have risen largely of late years, and at Sumbulpore a demand, unusual in "old times," for cotton and oil seeds more especially, has sprung up, which now, as the country is settling, must stimulate landholders and land-cultivators, in the hitherto unopened, and to Europeans unknown, Districts, north and west of Sumbulpore and on to the Nagpore Provinces.

(6.) With the exception of some Surveyors,*

* And also Mr. J. P. Meik.

I believe I have been the first European who has travelled through the Districts under remark, and along the Mahanuddy up to Chunderpore. The people seemed quite surprised to see me, and gratified also, everywhere shewing great civility, and exclaiming that now as the "Sahib Log" have come all will be well. None of the late Commissioners at Sumbulpore that I have heard of at least visited the Districts I am now remarking upon, and as they rank as the "garden of Sumbulpore," I am glad to be able to report what favorable features they present for the execution of such Public Works as will admit or entice travellers into these fruitful lands, hitherto shut out from all ready communication with more favored Districts as regards facilities of transit. The river which waters the Puddumpore

and Chunderpore Districts is a most difficult and dangerous navigation, and is, further, all but useless for seven months of the year.

(7.) Between Taug and Rampoluga, and one and a half miles from the former stage, the "Ebe River" is crossed.

This water-course is about 700 feet wide; the channel is twenty-two to twenty-five feet in depth, the bed is sandy generally, but boulders and massive groups of rock up-rise from its bed in many places; where the new road will cross the "Ebe" there is a fine bridge site, and the Mahanuddy, being so close by the flood stream of the former, is deadened in velocity by the back water the great river naturally throws into the mouth of its Tributary. There are certain signs of this at the "Ebe's" mouth and in its last reach.

(8.) Proceeding on from Rampoluga to Puddumpore there is nothing particular to note, nor does any difficulty exist to road-making.

On the contrary, the soil is particularly favorable, and, with the exception of some short and narrow valleys, the ground to be traversed consists of a light gravel soil. Ridges of Laterite gravel are also crossed, and it is with no difficulty that our new road can be guided along the natural high lands and ridges that nature has granted for road-making purposes.

(9.) The Mahanuddy does not overflow its maiden banks any where on this stage. Three

+ These streams are of no material nullahs,† however, consequence.

intersect the line for traffic. The only other water way to be provided will then consist of the few openings rice irrigation and the natural drainage requires in the rains.

(10.) Puddumpore is a thriving, happy-looking village. It is of some considerable extent, and has a business-like and busy appearance.

It is pleasantly and healthfully situated on the left bank of the Mahanuddy, and securely placed also, as no floods up-rise to a point that injures or endangers the town, whose safety is secured from such disasters as river bank erosion by the stratas of Gneiss Rock which underlie the soil the village has been erected upon.

(11.) The scenery here is very pretty, indeed almost beautiful. The high hills of the "Bara Pahar" country, situated on the river's right bank, abut upon and form a barrier that the Mahanuddy has naturally given way to. The river above Puddumpore turns from its general south-west course to one almost due north, until the bold and lofty mountains in the "Bara Pahar," receding again and retreating within themselves as it were, permit the river to return to its south-west and southerly direction.

(12.) The Mahanuddy's bed from "Sarnipalli," four miles down stream of "Puddumpore," becomes very free from rocks.

At "Puddumpore" they appear only as little islands useful too in obstructing and turning, and at the same time guiding and improving the river's dry season's channel. For the fact of the current impinging upon, and flowing past these rocky islands, entails and creates an easily navigated and comparatively deep channel, and because further, at "Puddumpore," "the rocks" are often in rows that margin the water's course; they are not scattered in thick debris like "wonderful hailstones" over the river's bed, nor do they pave it, as unfortunately is the case lower down.

(13) From "Puddumpore" to "Podigaun,"

* The "Kels" Nullah is crossed about one mile west of Puddumpore. This stream is about 250 feet wide with a level rocky bed.

which village is not in Sambulpore, but on the "Raigur Rajah's" lands, the new line of road will meet with no difficulty for the first ten miles of its course; * approaching "Podigaun," however, there must be a total deviation from the present route, as the track now followed diverges from the high lands, and passes over Mahanuddy ebur lands, flooded in the rains and consisting of a dead and heavy sandy soil, most difficult to traffic over with laden carts.

However, by keeping the new road some distance inland no difficulty is met with, and no flooded lands will be traversed.

(14.) The last stage, "Podigaun" to "Chunderpore," is favorable enough for road-making as far as "Bulpore." From this village to the "Maun River" a low basin of rice lands, plentifully sprinkled over with wheels and pools of stagnant water, must be crossed with care; by keeping away from the present track and out of the direct course and following rather closely the bank of the Mahanuddy, a very fair-weather road can be laid out.

(15.) At the village of "Chaunoulli" the river "Maun" is met with. This water-course is about 1,000 feet in width. It is evidently but a rainy season stream, being, like the "Ebe," almost dry when I crossed it. It presents features similar to the "Ebe," except that much fewer rocks are seen in its bed.

The sandy bed of the "Maun" is much thinner than that which exists in the "Ebe." In many places I saw rock paving underneath the thin film of water that was slowly flowing to the Mahanuddy.

(16.) It was very pretty here, and the approach to "Chunderpore" has a park-like, and most civilized or English appearance.

(17.) "Chunderpore" is a large village or Mofussil town. It has not though either the busy or happy appearance that "Puddumpore" presents; it is a very dirty place, with bad drainage. Upon little mounds or hills most of the houses are built, and between these mounds are pools of filthy shallow water fringed on all sides by black and sticky mud, and decaying water grasses and plants. I was very glad to get out of the centre and rear of the town and reach its frontage, the pure and picturesque Mahanuddy.

(18.) Viewing "Chunderpore" from the river† it is a very pretty village, and this effect is chiefly created by a bold conical shaped hill at the west end of the town. On the summit of this hill has been erected a Hindoo Temple, which acts as a land mark for a considerable distance to travellers when proceeding along the Mahanuddy's left bank.

(19.) The new road, as at present contemplated, terminates at "Chunderpore," but it may be found necessary to extend it next season to the boundary of the Sambulpore Province, or in fact to the Madras Presidency, and to the lands under the Government of the Nagpore administration.

(20.) This extension will take place through a fertile District. Its length will be, I was told, about twenty-two or twenty-five miles. Having

† No Maps are published yet of the Districts west of Chunderpore.

measurement, nor indeed satisfy myself on some other points. I hope this year to obtain from the Superintendent of the Ganjam Survey a Plan of the Districts that lie west of "Chunderpore" and join into "Raepore" and "Nagpore," &c.

(21.) From the above remarks I hope it will be seen that the construction of a fair-weather road, or indeed any class of highway, from "Sambulpore" to "Chunderpore," fifty-eight miles, will be neither difficult nor expensive. The only rivers or streams of any size that are crossed, viz., the "Ebe" and the "Maun," are not very wide, and only hold deep and unfordable water in the

§ Like the Mahanuddy above Sambulpore they do not overflow their maiden banks.

height of the rains. These rivers, too, present great natural facilities for bridging them; but this I do not contemplate will be necessary, at any rate not for some time, and probably not at all.

(22.) If hereafter found necessary, the new road can be raised, metalled, and bridged over its entire length, the bridges over the "Ebe" and "Maun" excepted, for a very moderate sum of money. Metalling work will cost but little comparatively; material is at hand everywhere almost, and at short "leads" from the road. The line will traverse besides, for fully half its length, soil of such a description, that natural metal may be said to compose the ground passed over.

(23.) The following abstract details are submitted as explanatory of the manner in which the Sambulpore and Chunderpore fair-weather road is to be constructed at first, and it is hoped that they will meet with approval.

The exact route the road is to follow having been fixed upon and marked out, after careful examination and survey, by Prismatic Compass.

Some rules and directions were issued for this season's works, of which the following is an abstract:—

1st.—In jungle all under-wood and trees to be cut down "for a width of 100 feet on each side of the centre line, the roots and stumps of trees, bamboo chumps, and such like to be stubbed up and entirely dug out for a distance of twenty-five feet on each side of centre line.

2nd.—"The surface of the ground, for a width of twenty-five feet along the centre, is to be levelled and cleared of all such obstructions as rocks and boulders, ant hills, clay and grave, heaps, and the like.

3rd.—"The centre, for a width of twenty-five feet, having been well levelled, the road is to be raised according to cross section No. 1.|| This raising will average

|| Vide Sections annexed. about one foot in the middle, the earth for so forming the road will be dug from sides trenches as the cross section depicts.

4th.—"In high, unflooded, and open lands, where no jungle grows, and where the tillage is not rice or crops requiring irrigation, the road will be constructed also according to cross Section No. 1, as a general rule. It is to be understood that all hollows and holes are to be filled up, and all obstructions removed, so that the new road will present everywhere a uniform and level surface to traffic over.

5th.—"All curves are to be very easy, and no sudden or sharp gradients are admissible, unless under peculiar circumstances, and which must be

reported for consideration and orders, supported by a Sketch or survey of the locality.

6th.—“Where the new road passes over rice fields and “paddy lands,” it will be raised from one and a half to three and a half feet as needful, and as the dips in the rice fields render necessary, this will be easily accomplished and perceived on the ground when laying out the work in detail. Cross Section No. 2 depicts the road as it will be constructed in two and a half feet of embankment. In all rice fields the berm will be fifteen feet in width, and for this season no side excavations will be deeper than one foot. The land cultivators will thus be able to till the beds of the excavation trenches, and but little ground is lost.

7th.—“For passing irrigation and drainage water across the road where raised, openings as per Section No. 3 will be left at such places as detailed examination will readily point out. These openings will, as a rule, be given in the lowest part of a rice valley, or it may be that Nos. 2, 3, and 4 will be necessary. The number varying naturally, as the width of the “paddy land” to be crossed enlarges, and as local natural circumstances point out, that waterway for drainage purposes must be increased.

“These openings will be paved with stones for a width of eighteen or twenty feet, and to a depth of two. The paving will be bedded down into the ground as Sketch No. 3 shows, and it will be well coated with small stones and gravel, so that its surface will be smooth for traffic and flush with the land on either side. The slopes or inclines, as marked on Section No. 3, will not exceed 1 in 35, and they will receive a 12-inch coating of gravel and small stones.

8th.—“All river and nullah banks are to be sloped down to the level of the bed of the water-course. The slope of the incline leading to the bottom of the streams channel may vary, as local circumstances require, from 1 in 10 to 1 in 20.

“The incline may be less than 1 in 20 with advantage, but must not exceed 1 in 10. The width of the road leading down to nullah and river beds must not be less than twelve feet. It will be widened hereafter to eighteen or twenty-one.

9th.—“Care must be taken to run the road over as little cultivable or tillage land as possible. Topes of trees are to be avoided, and no trees are to be cut which can be left standing with propriety. Further, no villages, houses, and tanks, or such like, are to be interfered with if avoidable under moderate expenditure; and if the same will take the new road clear of them in case it is found absolutely necessary to interfere with any villages or houses, orders must be solicited before attempting their removal.

10th.—“On no account will any interference be permitted with Temples, Mosques, religious spots of ground, or “Takoor” trees, &c., and the new road ought to be brought as distant, as convenient and proper, from all buildings of a religious nature.

11th.—“Finally, it is always to be borne in mind that this road is, in all probability, the germ of an important work, and the beginning of a more extensive and costly undertaking.

“Nothing then is to be executed which will militate in any way against future improvements, or the enlarging of this fair-weather line into a fully raised metalled and bridged road, and, on

the other hand, care must be taken that all favorable local features and details are noted and taken advantage of, so that as much as practicable will be accomplished towards the primary object, *viz.*, the construction of a first class fair-weather line, and, in complying with the directions here given, nothing need be done that will lessen the value of present works or increase the expense of future operations.”

(24.) To resume, I have to report that the road, “Sumbulpore” to “Chunderpore,” will, I hope, be opened out and completed as a fair-weather road as far as Puddumpore in 1861-62.*

* Or a distance of 36 miles. This will leave twenty-two miles for next working season.

(25.) To the “Burmoor” works on the road, “Cuttack” to “Sohela,” many Sumbulpore coolies were sent, this diminished local labor, and hence the “Chunderpore” line has suffered; but it was not anticipated that the whole road would be perfected, and as much will be completed as was proposed.

I have every hope too, well within the Estimate of Rupees 250 per mile.

(26.) I have, in this memorandum, purposely refrained from describing the Mahanuddy, as a separate Report on that river will be hereafter submitted.

(27.) In conclusion, the Officiating Chief Engineer will, I think, be gratified at learning that I discovered and procured some specimens of rich iron ores, and I think I have heard where copper is to be found. From three localities I obtained limestone, one being the pure light grey limestone, that in Ireland is so valuable for building purposes and for lime also. The stone I found will, I am confident, make admirable Hydraulic lime, and I do not think that similar lime stone has been seen in Bengal.

I have sent specimens of the iron ore and limestone, to Professor Oldham for analyzation, &c., that gentleman having kindly promised to have this done for me.

(28.) The traffic by land between Chunderpore and Sumbulpore is very considerable. The navigation of the Mahanuddy from below Chunderpore being very difficult, and indeed not practicable for laden boats, except during the rains.

(29.) All cold weather crops, such as oil seeds, and also much cotton, passes *via* Chunderpore and Puddumpore from the Nagpore Province to Sumbulpore. At this latter town there are a number of Merchants’ and Mahajuns’ managers, whose Agents in “Nagpore,” “Raepore,” and “Chutteesgurh†” purchase

† As part of Raepore is called. largely on account of their masters. Much of the cotton that is sent from Chutteesgurh to Jajepore, Jellapore, and Midnapore, and the littoral Districts towards Calcutta, and probably to this latter city, proceeds *via* Chunderpore and Sumbulpore, being carried on Pack or Brinjaree bullocks.

(30.) On my tour I met every day long lines of buffaloe carts, each cart was drawn by two of these animals and also by two bullocks, as “leaders.”

By this means as much as thirty maunds of produce is transported on one cart.

(31.) The Brinjaree bullocks I met in herds, frequently as many as 400 were in one drove. These pack bullocks do not always transport cotton, very many carry castor-oil seed, linseed,

mustard seed, &c.; such produce as this is invariably bound to the Sumbulpore Merchant or to the Sumbulpore Agent of some Cuttack Firm.

(32.) The falls of "Heerakood," *vide* Map annexed, being by far the most dangerous on the Mahanuddy, Sumbulpore may be safely described as the head of the constant navigation of that river.

"Heerakood" being in fact impassable for laden boats when the river falls after the rains terminate.

PART 2.

SARUNGURH DISTRICT.

(33.) When at Sumbulpore from enquiries there made regarding the present and natural routes of traffic from the north and west, or from "Nagpore" and "Raepore" to the Sea Board, I heard that in the dry season, to avoid the Mahanuddy at "Heerakood," &c., many Merchants transported their goods from "Raepore" through the "Sarungurh District," which, I may mention, is an independent Rajah's Territory.

I determined, on being so informed, to visit Sarungurh and judge for myself the facilities or otherwise that this District afforded for road-works, more especially as I was told last November* by the Superintendent of the Ganjam Survey that roads from the westward or north-west from "Raepore," through "Sarungurh," and thence to "Sohela," were not practicable unless under heavy outlay.

(34.) From "Chunderpore" I marched through the east portion of "Sarungurh" to "Sohela," where I struck the main Raepore road.

(35.) I am happy to be able to report that I found a very excellent natural track in "Sarungurh."

I came upon this track about fourteen miles south of "Chunderpore."

(36.) The route I marched along through "Sarungurh" is shewn by the red dotted line from "Chunderpore" to "Sohela" on the accompanying map.

The present traffic track to the westward on to the "Raepore" District and "Chutteesgurh," is shewn by a hard red line.

(37.) A curious chain of hills runs through the middle of "Sarungurh" as roughly shewn on the annexed map.

Remembering no doubt these high ranges, Major Saxton† informed me that a road could not easily run through Sarungurh, but on examination of the ground I found that the traffic track to "Raepore," &c., crosses the above mountains through a natural gorge or break in the hills.‡ To travel over the

Pass is by no means difficult even now, though, as it is a purely natural road, rocks and boulders obstruct severely the passage of laden carts.

(38.) Some years ago, in 1856-57, the Rewah Rajah and his immense camp, which included all kinds of Up-country vehicles, came from "Chutteesgurh" in to "Sarungurh" by the track depicted on the map annexed, and thence proceeded *via* "Sohela" and "Sonepore," &c., to "Pooree."

(39.) There is another Ghât to cross in "Sarungurh." It is situated about the point B on Plan. The north ascent is the sharpest,

being on the average 1 in 25 or 30. The south descent is very easy and no where greater than 1 in 40.

The total rise may be seventy feet; the road being a natural one is rough in spots. It is narrow too, and is sunk or has been worn down in places five and six feet below the natural level of the ground, but sufficient improvements could be made here for a comparatively small sum of money.

(40.) With reference, then, to the Sarungurh District, I would propose that permission be given to construct a fair-weather road from "Sohela" along the track my map indicates to Lendra, and thence, crossing the hills through the natural gorge at A, proceed to the westward into Puljur, and so on to the Mahanuddy,§ which the road would meet some twenty-five miles north-west of Chunderpore, finally terminating at the confines of the Bengal Presidency and meeting the traffic track proceeding out of "Nagpore" and "Raepore."

(41.) I regret I have no map to depict this proposition, but I think it will be allowed that the proposed road will be in all probability an important one. Its construction may render it unnecessary to expend any more money upon the "Chunderpore" and "Sumbulpore" line.

It will tap new countries, and catch nearly all the traffic that now proceeds *via* "Chunderpore" by land, and the Mahanuddy when possible.

This road will be a direct communication from the northern part of "Raepore" and from "Chutteesgurh," the most fertile District in "Raepore" to "Binkah" and "Sonepore," &c. It will cut off also many miles and the worst lengths by far of the rocky Mahanuddy.

(42.) In any case I beg strongly to recommend that the traffic track now under notice be examined carefully in 1862-63, for I feel confident a very useful road can be opened along the present route westward from "Sarungurh" to the "Raepore" Province, &c.

The construction of a road in the direction I recommend will be attended with no difficulty. The expenditure must be moderate, consequently Rupees 250 per mile will construct an excellent fair-weather line, allowing say Rupees 500 extra for the improvements of the Ghâts A and B.

(43.) The length of road to be constructed may be calculated at 50 miles, and the cost, in round numbers, I estimate as follows:—

50 miles fair-weather road, at	
Rupees 250 per mile	Rs. 12,500
Extra for improvement of Ghâts A and B	1,000
Total Rupees	13,500

(44.) The route to be traversed is not inundated at any time or by any river.

It crosses the heads only of some minor tributaries of the Mahanuddy and traverses a country whose soil is peculiarly well suited for road-making.

(45.) "Sarungurh" is a District in which iron ore and limestone are found, and putting on one side the advantages which this road will give in a commercial point of view, politically, it will be an important communication.

* *Vide* paragraph 31 of Memorandum No. 265 of 23rd November 1861.

† Superintendent, Ganjam Survey.

‡ Or at A on Plan.

(46.) These "Gurjat" Districts are sealed books, as things are, to the European traveller, and it is only with great delay and difficulty that troops can be moved for want of roads. The construction of fair-weather roads in the "Gurjat" territories will do more, I feel confident, to civilize these Districts and quiet them permanently than the display of troops and the presence of a large Military Establishment at the Head-Quarters of the Province, some fifty or 100 miles off.

(47.) As things are, the disaffected know perfectly well that "the Sepoys" cannot traverse their lands without great difficulty and only by slow and short marches.

They consequently feel quite secure, and resist the law almost at pleasure.

A very different state of things would, I doubt not, exist if roads intersected their territories.

(48.) I conclude by soliciting favorable consideration to the construction of a fair-weather line as now submitted to notice.

Both commercially and politically it will prove, I am confident, a most useful communication, and the map shews, I think, that it will complete a system of roads that embrace and intersect much of those fine, productive, interesting, and improvable Districts that have hitherto been hardly known to Europeans, and consequently have not been appreciated.

(49.) Mr. Shore, the Officiating Commissioner of Cuttack, when speaking to me at Sonapore regarding these lands and the fair-weather roads now in progress in the "Gurjats," remarked "what noble Districts they are." I never visited lands so improvable and with such a valuable future before them if their natural capabilities were only taken advantage of, and improved means of communication granted.

T. N. ARMSTRONG, C. E.,

Superintending Engineer, Cuttack Circle.

Memorandum on the Raepore Road, Sohela to Jonk River.

This portion of the Raepore Road becomes of special importance since the opening up of a new line from Sohela *via* Sonapore, Boad, Burmool, and Bankee to Cuttack was sanctioned.

2. The traffic and produce of Raepore has hitherto, to a great extent, proceeded along the line under immediate notice, and which commences at the Jonk River, the boundary line between the Bengal and Madras Presidencies.

3. When the Raepore Road was constructed I am unable to state,—until lately it was a line of considerable imperial importance.

Along it the Calcutta and Bombay Dāk proceeded. Some years ago this Dāk was horsed, and a few of the Dāk horse stables at the staging or halting grounds are still to be seen.

4. As a general rule, the road has been well laid out, its construction originally was evidently such as might now be given to a first class fair-weather road. None of the streams or nullahs that intersect the line appear ever to have been bridged, and drainage and irrigation water passed, and passes now across at unraised and low spots.

5. Further, the small embankment that originally was constructed here and there in rice lands has been cut through and breached by the

erosive action of drainage and irrigation water, which, unprovided with escapes, naturally ponded up, and overflowing, created the gaps mentioned.

None of these are extensive or of the slightest importance, and I never saw so neglected a road where much traffic existed in such good order.

This is attributable, *first*, to the fact that from Sohela to the Jonk River, or the whole length of the road under notice, a distance of about fifty-five miles, the line is not subject anywhere to flood attack; and *secondly*, because fully two-thirds of the distance traverses light and fine though very firm gravelly soil, which, even in a state of a complete nature, makes a capital road.

This soil is so hard also and so bound together, that where the track passes over rising grounds and across ridges that are ascended by rather steep gradients no hurtful erosion or furrowing from rainfall has taken place.

6. The earthwork repairs executed on this road of late years have been of the most trifling character. They consisted, as one can perceive from inspection, of such petty works as not to be really worth noting, and I could observe no traces of any Departmental operations on the road itself.

7. Seldom did the predecessor of the late Executive Engineer of the Raepore Road Division inspect his Mofussil charges, and once only since he took charge did Mr. Brown visit the road to the Jonk River. However, the Officer just named does not, I believe, deserve censure for not having made more frequent journeys into the Mofussil along this line.

The year that Mr. Brown arrived at Sumbulpore* he inspected the Raepore Road, and in 1859, in 1860-61 he wished to do so again, however no European could then with safety proceed on Mofussil tours in the Sumbulpore District without police guards. These could not be spared by the authorities, and the Executive Engineer had to remain at Head-Quarters and content himself by sending a gang of coolies to "petty repair," as best they could and would, under the guidance of Mohurirs and head Peons.

8. The favorable natural features of the road has then, for many years past, kept it in good order.

9. Some improvements, however, were begun and in part carried out by Mr. Brown, such as the erection of foot bridges over the deepest and largest nullahs.

In the rains many of these streams are for days at a time unfordable. No ferry boat or dinghee was employed, and great delay to the "Dāk" and to all travellers at such a season was of course the result.

Naturally, since the bridges have been erected, much convenience has been experienced by the "Dāk" and by all travellers.

10. The construction of these bridges is rude, and their design is of a very temporary character, but they are considerable improvement over things as they were. Their roadways are sufficient in width to pass pack bullocks, horses, palanqueens, and all such light traffic, which, too, under existing circumstances of the District, and under the present character of its communications, is the only land traffic that takes place in the rains.

11. The road from "Sohela to the Jonk River" runs in a due westerly direction. To the north is the "Mahanuddy," but between the

road and the "Great River" are extensive ranges of very high hills.

There are no breaks in these ranges through which the spill waters of the "Mahanuddy" could escape in time of inundation, even if its floods over-rode the river's maiden banks, which they do not above Sumbulpore.

12. The country from "Sohela" to the "Jonk" River is divided into narrow valleys by the many hills of the "Pulgarh and Sarungurh District."

The former country begins two miles west of "Loharpalli," and ten or eleven from "Sohela." It is an independent territory, ruled by its own chief, who bears the name of his lands.

13. "Pulgarh," as a whole, is rather a poor and mountainous District. The spurs of its many hill ranges divide the country into a number of narrow valleys, which here and there widen out into rather extensive basins of cultivatable land.

The area of these lands, added to the surface of the hills whose drainage waters flow down into the valleys between, is not extensive enough to create large streams or water-courses, or to cause any inundation.

14. For about half the line the drainage flows southwards, forming the heads of nullahs that eventually lose themselves in the "Tel" and the "Ong" Rivers. Again, others turn west, falling into the "Jonk," mingling their waters with this river, which, flowing due north, loses itself at last in the Mahanuddy.

15. As the Jonk River is approached its tributaries are met with, but they are trifling streams. The "Jonk" itself is a quiet stream, and though, doubtless, a large volume of water passes down its channel in the rains, the slope of its bed and the capacity of its channel are sufficient to pass off the discharge without its having to seek relief by spilling over the banks.

16. The stages on the road Sohela to the Jonk River are as follows:—

	About Miles.
1st.—Sohela to Loharpalli	9
2nd.—Loharpalli to Singorah	7
3rd.—Singorah to Komarpalli	7
4th.—Komarpalli to Saraipalli	6
5th.—Saraipalli to Bulbuspore	6
6th.—Bulbuspore to Bussenah	7
7th.—Bussenah to Dooree	7
8th.—Dooree to Sankrah or Jonk River	6
Total miles	55

1st Stage.—Sohela to Loharpalli.

17. The road for the first five miles of this stage is good and in fair preservation, no nullahs are crossed, but a few bridges are required for drainage, &c.

Where the road passes rice fields it has been worn down by traffic, and "wear and tear" has reduced its crest to the level of the land it traverses.

18. The last four miles of this stage passes through jungle, the soil is light gravel, with gneiss rock here and there protruding. However, there is no present difficulty in travelling with laden carts.

Thick jungle margins the track, which is very crooked in many places, winding about as some nullahs are approached and crossed. On two or three of these nullahs wooden bridges have been

erected, but they are now in a state of entire rotten debris.

The traffic cannot cross them and passes by on loop roads.

2nd Stage.—Loharpalli to Singorah.

19. This is by far the most difficult and troublesome stage of the whole. Immediately after passing "Loharpalli" the road enters a gorge or natural pass in the hills. They appear before the traveller as a complete barrier to his passage; but as one follows the track its windings disclose breaks and gaps, which were evidently granted and designed by Nature for a passage through the "Pulgarh and Sarungurh range."

20. The nature of the ground between "Loharpalli" and "Singorah" is such that in road-making the only practicable passage must be pursued in a general way; but the favorable details of the locality were not attended to, or taken advantage of by the individual who originally laid out the road. It twists and turns without cause, winding now among and over rugged and troublesome boulders, and again dipping into a nullah bed and rising up from the same through what appears the bed of some little hill stream.

21. The traffic over this stage meets with considerable inconvenience, and on the whole length there is but one easy piece to travel over.

22. Jungle fringes the line for nearly the entire stage; some of it is very dense.

At two or three places where the hills almost meet, and whose jungle covered slopes overhang the road, the "Sumbulpore Rebels" delighted to hide, and, nesting in the mountain sides, committed robberies at will on the passing traveller.

The Ghât or Pass close to "Singorah" is noted for the stand the Rebels made in 1858-59 against the "Raepore Force," who, however, dislodged their opponents from the breast-works they had thrown up on the sides of the Pass by administering a few well directed rounds of shot and shell, slaughtering many.

3rd Stage.—Singorah to Komarpalli.

23. With the exception of the last mile, this march passes over a capital natural piece of road. A few cheap and simple repairs will place the first six miles of this stage in first-rate order, passing, as it does, over natural metal. The road, too, has been well laid out, traversing an open country capable of great improvement.

24. The last mile of the march is a troublesome piece, three nullahs intersect it, none of them, however, inundate their banks; they flow through deep channels, and have cut their way through a hard gravel, and in places a gravel and rocky soil.

Approaching the first of these nullahs* the road must be diverted to the northward for a distance of about 800 yards. This diversion will cause a considerable improvement over existing matters.

The tract descends to this first nullah by a gentle incline for some distance. Just here the road crosses the heads of some very minor water-courses, and from the absence of repair of late years it has worn down catching the waters of these rain streams, and consequently has become a catch drain or very minor tributary to the nullah that intersects it at the foot of the incline.

25. The change of road requisite here, with bridges over the three nullahs mentioned, will cost but a moderate sum. The nullahs are about fifty feet wide, and their banks and beds being

* Which are all very close to each other.

hard gravel or gravel and rock, no foundation difficulties will be met with.

4th Stage.—*Komaripalli to Saraipalli.*

26. For nearly the whole of this march the road is in very fair order, four-fifths passing over naturally good soil for road works. One-fifth crosses rice fields, and here raising and re-alignment are indispensable.

The track has been cut down by the traffic in places fully 18 inches below the surface of the "paddy fields" it passes through. The original road cannot be said to exist on these low spots. However, the improvement of this stage will cost but a small sum, especially as no nullahs intersect it, and three or four small drain bridges will suffice to pass rice irrigation water and rainfall discharge.

The 5th and 6th Stages, viz., *Saraipalli to Bulbulpore and Bulbulpore to Bussenah.*

27. In all thirteen miles may be remarked on at the same time, because the description, faults, and requirements of the one stage are similar to the same on the other.

28. These two marches traverse for nearly the whole distance an extensive tract of fertile country. Its principal produce is rice. The soil, as may be supposed, is badly suited for road-making when unmetalled. It is chiefly that black tenacious clay, which, when wet, becomes so sticky and heavy to traffic over.

29. The original road for the two marches under immediate notice has practically ceased to exist.

I could not perceive the slightest symptom of original works, such as a trace of a small embankment on which one would suppose the road constructor would have carried his line across rice fields.

From faulty original construction, and from the track changing over the "paddy lands" as the traffic moved here and there, seeking a smoother passage, the road has dwindled down into a mere village-like cart passage.

Its surface on the average is one foot lower than the land on both sides, and it is one of the most sinuous roads I have ever seen when the length, thirteen miles, is considered.

With all, though the general direction is good, and when realized within the limits of its sinuosity, an excellent line can be constructed, specially as the rice lands are often divided by narrow ridges of soil well adapted for metal.

30. Some nullahs are crossed on these stages, one is rather a large one. It is situated a mile or so east of "Bussenah." The channel is eighty feet wide and about twenty feet in depth.

A useful foot bridge now spans this water-course, which, when the road is re-modelled, ought most certainly to be bridged.

The bed and banks of the stream offer no difficulty to contend against as regards bridge works and foundations.

7th and 8th Stages.—*Bussenah to Dooree and Dooree to Ankrah or the Jonk River.*

31. These stages like the preceding ones are taken together, the road over their length being similar in character.

32. Unlike the last two marches just described the country passed through from "Bussenah" to the "Jonk" River is very jungly indeed; from two miles west of "Bussenah," jungle, and in some places thick underwood, margins the

road,—approaching the "Jonk" River the country is open, the trees become thinner, and the soil is such that "wood clearings" would convert large tracts into tillageable land, as signs of this new village dot the approach to the "Jonk," and retired from the road, the smoke of lately erected dwellings give sure marks of extending cultivation and improvement.

About "Dooree" are also many symptoms of enlarging cultivation.

33. From "Bussenah" to the "Jonk," the soil being nearly all light clay, or sand and fine gravel, travelling is easy and agreeable. At a few places where rock and large stones exist the road is rough and uneven, but these spots are the exception.

34. Some small nullahs intersect this length of the line, attempts have been made to bridge them all, but the works are in part worn out. However, the late Officiating Executive Engineer has had two useful foot bridges built, and also three rough timber structures to pass cart traffic. These works from their rude construction cannot

* The timber used for the bridges. last long, and must be considered as very temporary erection. Their cost, however, has been but a trifle, as "Sal" and "Mowah*" trees are very plentiful between "Bussenah" and the "Jonk" River.

35. The "Jonk" is 900 feet wide at the present crossing; its channel is twenty to twenty-two feet in depth, with a coarse sandy bed. Boulders of gneiss up-rise here and there, and the same rock crops out in spots from the banks, which are firm clay as a rule.

There would be no difficulty at all in bridging this water-course.

36. The length of thirteen miles, "Bussenah" to the "Jonk," is quite, and indeed very readily passable for laden carts.

37. The track is very sinuous though, and seems to have wandered here and there since the work was laid out originally. There are no reasons why the road should be so crooked, and before improvements are begun, re-alignment must take

place for fully two-thirds of the united stages.† All the nullahs should be bridged; their banks and beds are rocky, or gravel and rock, and their channels being narrow and

shallow the expenditure of doing so will be small. For the same reasons there will be no difficulty in executing the works; two or three drainage spans are necessary also. The majority of the bridges should have eight feet apes, and two only ought to have as large an opening as twelve feet.

38. Having spent five days in examining the Raepore Road, "Sohela to the Jonk River," I came to the determination not to attempt its improvement on any scale during the year 1861-62, and for the following reasons:—

1st.—The road as it exists is fairly passable in the dry season for laden carts.

2nd.—The line in many parts is so very sinuous that, without re-alignment and surveys, it would be injudicious, because expensive and unworkmanlike, to raise and re-model the road along the present crooked track.

3rd.—So much work was in progress in other parts of the Sumbulpore District for opening up roads where none before existed that I considered

improvement of present communications should give way to construction of *new* lines for traffic.

4th.—We had not tools, and indeed not work-people, to commence improvement of the Jonk Road on any scale.

39. For the above reasons, I determined only to work at the worst place on the road.

This is the Stage "Loharpalli" to "Singorah," a very rocky and uneven march, and hence extremely difficult to traffic over with carts.

40. I placed Mr. Assistant Engineer W. C. Brown in charge of the "Sohela" and "Jonk River" Road, with detailed orders to improve the line where it passes through the breaks in the "Pulgarh and Sarungurh range." Further, he was directed to have the jungle cut from its commencement, east of "Loharpalli" to "Singorah."

On the Stages "Bussenah to the Jonk River," jungle-cutting is also to be carried out this season. The average width to be cut will be 100 feet on each side of the present track, and in the narrow defiles of the "Loharpalli and Singorah Gorge" the jungle and underwood is to be cut down for 200 feet on each side of the road. For many reasons as will be understood, I hope this increased width was necessary in the hills.

Again, Mr. Brown had orders given to him to improve all rock and rocky spots on the road, and to straighten and render easy for traffic such places,—he was told also to slope down and reduce the gradients of inclines leading down to nullahs, to clear their beds at the point of crossing of any obstructions existing, such as rocks and boulders, tree stumps, snags, and so forth.

41. Having brought the Assistant Engineer with me to the Jonk River, I was enabled on the ground to point out what was absolutely necessary for immediate execution under the considerations noted before.

42. Finally, Mr. Brown has been directed to make a careful Survey and Section of the line.

This is indispensable in my opinion for various reasons, and chiefly because on many stages a total re-alignment of the road must be carried out before extensive improvements can be commenced, and Surveys and Maps are very necessary where re-alignment is contemplated.

Taken with the Plan, the Section will guide one in estimating the amount of bridge works necessary, as well as the quantity of earthwork required to raise the road in rice fields in low spots and across nullah valleys. This Survey is in active progress, and ought, by this time, to be nearly completed. In addition to the above, the Assistant Engineer has under him the surveying and also the construction of the new road—"Sohela to Binkah."

He has also been directed to fell sal timber, and to note carefully where ghooting and brick clay exists,—collecting also this season as much ghooting as practicable, and probably necessary for the new bridges the road requires for crossing the smaller nullahs, and for drainage purposes.

43. I hope these proceedings will meet with approval.

44. Under them the present road will be improved this year (1861-'62) in bad spots, at disagreeable nullah crossings, and upon the rocky and uneven Passes between "Loharpalli" and "Singorah."

Where it exists, all jungle will be removed to an average distance of 100 feet from the road side, which it now closely fringes, and in the hill passes

the "Rebels' nests" will be disturbed somewhat by having the underwood cut down for 200 feet on each side of the track. This will be a great improvement if even appearances only are considered.

Finally, by the carrying out of the Survey and Section of the line, the road can be laid out for work at once, and truly, next working season. Detailed and correct Estimates of description of work required, and the quantities of the various kinds necessary, will be compiled at leisure in the rains from the useful data the Sections will yield; and further, the perfecting, or at any rate the large advance towards completion, that the *new* road works now in progress will have attained by next June, will liberate numbers of workpeople, and a corresponding quantity of tools for "improvement operations" next cold weather.

45. The road "Sohela to the Jonk" is the "Grand Trunk" of the "Sumbulpore" and "Gurjat" Districts. Along it even now proceeds a very large Goods' traffic, many travellers, and numbers of pilgrims to Juggurnauth.

Indeed, any one who was new to this route, as I was, would be equally surprised, I am sure, at the traffic.

46. Buffalo carts and pack bullocks transport the produce from Raepore and its adjoining Districts; on a morning, or from 9 A. M. to noon or one o'clock, I have counted as many as ninety buffalo carts, each containing thirty maunds of produce, besides droves of laden bullocks.

47. Much of this traffic, more especially cotton, proceeds not to "Cuttaek," but to "Sonepore," and then, diverging to the south-east, proceeds through the lands of "Boad" and "Goomsur" to "Ganjam."

48. The bullocks return laden, sometimes with cocoanuts, but chiefly with salt.

This latter trade though will soon be put a stop to, as the Government of Bengal do not think proper to admit Madras Salt into Provinces under their rule.

When the Madras Salt is shut out the Cotton now sent to "Ganjam" will doubtless proceed to "Cuttaek," the Bingaries taking on their return trip Orissa manufactured salt.

This change must take place I consider, for it is the margin of profit yielded by both cargoes, as I may say, that pays the Bingaree, who naturally will refuse to proceed to "Ganjam" when his bullock must return unladen and profitless; all this will benefit "Cuttaek" and its trade.

49. A detailed scheme for the entire improvement of the road, "Sohela to the Jonk River," will be submitted about July. This scheme will be, I hope, fully supported by Estimates, Plans, and Section. With these papers I shall forward, for consideration, a descriptive memorandum detailing what works I would propose for the re-modelling of the Sumbulpore and Raepore "Grand Trunk," and meantime I beg to state that Rupees 500 per mile, or 58 miles \times 500, *viz.*, Rupees 29,000, has been sanctioned for the roads' improvement. I do not consider that much more than this amount will be necessary, unless all the larger nullahs be bridged, which, in my opinion, they ought.

50. The line is a most important one looking at the Map of India, it is one of the roads that at once catches the eye, and its usefulness, both in an imperial and local point of view, is considerable, and will increase year by year as "Orissa," the

Gurjats," "Sumbulpore," and the "Central Provinces," or the "Nagpore Districts," improve, and as their cultivation extends. This must take place I consider under the late increased and increasing demand that every where exists for all kinds of agricultural produce, stimulated, too, by the formation of new roads, improved communications, and the execution of other public works throughout the country.

51. Looking a little forward of the present state of things, and with a view of meeting the future, I would wish much to re-model now the "Sohela and Jonk River" Road, and convert this present imperfect line into a completely raised, bridged, and metalled communication.

There are no large rivers to cross,* no inundations or floods to guard against and provide for, and metal is every where abundant and close at hand.

Brick earth exists at many places, as does shooting for limes; and finally, sal timbers and all such requisites for public works, with even iron, abounds.

I saw two mines of iron stone on my tour along the road. One at a village two miles south of "Komarpalli" is of the richest description, and can be almost surface quarried.

52. However, as a first proposition, a moderate or curtailed scheme may be more likely to meet with approval, especially in a financial point of view.

I would propose then to submit a project for the construction or re-modelling of the line, "Sohela to the Jonk River," as a fully bridged and raised but unmetalled road; such a scheme to be supported by Plans, Sections, and Estimates.

53. I regret having no Map or even a Sketch Plan† to submit with this Memorandum, but the unavoidable omission will be rectified hereafter when the Surveys in progress are perfected.

† As before noted, no Map on any useful scale has to date been published of the Districts west of Sohela.

T. N. ARMSTRONG, C. E.,

Superintending Engineer, Cuttack Circle.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, MAY 28, 1862.

OFFICIAL PAPERS.

A SUPPLEMENT to the GAZETTE will henceforward be published, weekly or twice a week, according to circumstances, containing such Official Papers and Information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.

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Government of Bengal.

Water Communication between Dacca and Sylhet.

Survey of the Kossia River and of a proposed Road from Phenchoogunge to Sylhet.

From BRIGADIER-GENERAL ST. G. D. SHOWERS, C. B., Commanding Presidency Division, to the Secretary to the Government of Bengal,—(dated Head-Quarters, Flat Koonai, off Phenchoogunge, on the River Kossia, the 17th March 1862.)

I HAVE the honor to report my arrival at this place, and I consider it of importance to state, for the information of His Honor the Lieutenant-Governor, that the Flat Koonai, in tow of the Steamer *Tay*, with the Head-Quarters and greater portion of the 33rd Native Infantry, made the passage to this without any obstructions from want of water in the rivers or narrowness of the channel.

2. From intelligence I received in Calcutta of the want of water in the Megna and its tributary streams, I had directed the two Detachments who preceded me to land at Lukkye and march thence to Sylhet, a distance of about fifty miles. As this country is destitute of means of transport by land, and the route by land to Sylhet is intersected by numerous small streams, the march of the Detachments was attended with delay and difficulty.

3. After the arrival of the Steamer *Tay* at Dacca, Captain Jowett, the Commander, ascertained from the various Pilots who were acquainted with these rivers that Phenchoogunge, a Village only a long day's march from Sylhet, could be approached by proceeding up the River Kossia. As the accounts of the Pilots were sufficiently

decisive, Captain Jowett consented to undertake to land the Troops there.

4. The passage has been quite successful, and I beg to recommend that in future all boats with Troops and Stores destined for Sylhet may be landed at Phenchoogunge, and sent across by land.

5. From the concurrent statements of all from whom I enquired, it is evident that in the shallowest places, where the water of the Kossia is at the lowest, there is never less than ten feet of water.

6. To facilitate the navigation the rivers should be surveyed, but it may be proper to state now, as a guide to Steamers that may have to come up before the survey is completed, that the river route lies by Lukkye and Azmeergunj. About four hours steaming above Azmeergunj the mouth of the Kossia is entered, after which its course is to be followed till it reaches Phenchoogunge.

7. It is three whole days steaming to Phenchoogunge from Dacca, it will probably take two days to return, and as a Steamer and Flat can carry six days supply of coal on board, there would not be even the necessity of having a depot of coals on the route.

8. If this suggestion should be adopted, it would be advisable to have a raised metalled road made between Phenchoogunge and Sylhet, so that carts might travel along it at all seasons.

9. I have requested Captain Jowett to draw up a Report of his opinion of the navigation of the Kossia.

From E. H. LUSHINGTON, Esq., Secretary to the Government of Bengal, to BRIGADIER-GENERAL ST. G. D. SHOWERS, C. B., Commissioner of the Coasyah and Jynteah Hills,—(dated the 22nd April 1862.)

I AM directed to acknowledge the receipt of your letter No. 14A, dated the 17th ultimo, reporting the successful passage of the Flat Koonai, in tow of the Steamer *Tay*, with the 33rd Native Infantry up to a place called Phenchoogunge, a long day's march from Sylhet, and suggesting that in future the water

communication with Sylhet may be kept up to that place and a metalled road constructed joining it with Sylhet.

2. In reply, I am desired to convey to you the Lieutenant-Governor's thanks for your valuable suggestion. The Marine Authorities have been requested to order a survey of the river up to Phenchoogunge, and instructions will be issued from the Public Works Department of this Office for a survey of the proposed road from that place to Sylhet.

Government of Bengal.

Military Operations in the Cossyah and Jynteeah Hills.

From BRIGADIER-GENERAL ST. G. D. SHOWERS, C. B., Commanding the Presidency Division, to the Adjutant-General of the Army,—(dated Head Quarters, the 26th March 1862.)

I HAVE the honor to forward, for submission to His Excellency the Commander-in-Chief, a Report from Colonel H. F. Dunsford, C. B., Commanding the Troops in Sylhet, of the successful attack of the stockaded Village of "Raliang" by the Troops under his Command on the 20th instant.

2. I beg to call His Excellency's attention to the excellent arrangements made by Colonel Dunsford in planning the attack on this position, and to the completeness of his plans for surrounding the Village of "Munsow," to which may be attributed the evacuation of this strongly fortified position without resistance.

3. I have also to submit, for His Excellency's favorable consideration, the good conduct and cheerful spirit displayed by the Troops engaged in these harassing operations.

From COLONEL H. F. DUNSFORD, C. B., Commanding Troops in Sylhet, to the Assistant Adjutant General of the Presidency Division,—(dated the 23rd March 1862.)

MY Progress Report which I forward with this, for submission to Brigadier-General Showers, C. B., Commanding the Presidency Division, will have informed you of my having engaged the Rebels at Raliang on the 20th instant. I have now the honor to transmit a more detailed account of the action.

The Village of Raliang is situated about twenty miles east north-east of Jowai, and is a large and prosperous town built as most of the Villages in this part of the country, and in a very scattered manner, the houses being in clusters of three and four together on the slopes of hills with ravines running between the different clusters; they are well raised, substantially built of wood, with plank or matted walls, and thatched roofs.

Major Rowlatt, the Deputy Commissioner of the Cossyah Hills, who accompanies me, had received

28TH REGIMENT PUNJAB
INFANTRY.
4 European Officers.
6 Native Officers.
198 Rank and File.

Shamphong with the

44TH REGIMENT NATIVE
INFANTRY.
4 European Officers.
3 Native Officers.
174 Rank and File.

intimation from his spies that the place was strongly stockaded, and we might anticipate considerable opposition. I marched from Force as per margin, and on approaching within about two hundred yards of the stockade of Raliang, which is distant from the Village about a quarter of a mile, I found a strong stockade had been thrown across the road, extending, in a semi-circular form, about 250 yards, the strongest part of which lay immediately across the road (a narrow foot-path) by which I was advancing.

The former experience of Lieutenant-Colonel Richardson, Commanding Her Majesty's 44th Regiment

Native Infantry, and Major Rowlatt, had taught them that the stockade on the pathway was always the strongest and most obstinately defended, and thus cautioned me to avoid an assault on that if possible, I therefore directed a Company of the 28th Regiment Punjab Infantry, and a Company of the 44th Regiment Native Infantry to endeavor to turn the flanks, but, owing to the deep and precipitous ravines in front, this was found impracticable, and they simultaneously attacked each side, and under a heavy fire of matchlocks and arrows carried it with a rush; the loss to the Rebels was not very severe, as we found only two bodies in the entrenchment and three said to have been killed by the parties I immediately sent into the ravines in pursuit. The entrenchment consisted of a ditch about three feet deep and as many wide, filled with a *chevaux de frise* of sharp spiked bamboos; the earth had been thrown up as a breastwork and was heavily loop-holed and crowned by a thick palisade of spiked closely entwined bamboos six or seven feet high; the density of the jungle favored the retreat of the Rebels, and, lightly equipped as they are, when once they get into the ravines and jungles it is almost hopeless to pursue; our loss was trifling, being two men slightly wounded with arrows, and four by bamboo stakes. The stockade and village had been totally destroyed, and I yesterday made a march on this place, which is also heavily stockaded; but the Rebels, seeing I had made arrangements to attack them on all sides at once, again resorted to their ravines and jungles, and we entered without opposition an extensive double line of stockade, which it must have taken some eight hundred or a thousand men hard labor for a month to erect; this is the first occasion of their giving up a stockade without some shew of resistance, and may, I hope, be taken as an indication of their feeling the contest to be hopeless, and that they may now soon return to their more peaceable pursuits; although their loss of life may not have been considerable, they will for many years feel the loss of property the rebellion has cost them, as it has been the Deputy Commissioner's policy throughout to destroy all stockaded villages, a duty he has been enabled to carry out by the success which has hitherto attended all the assaults made by Lieutenant-Colonel Richardson and his gallant Regiment.

The health and spirits of Officers and Men are excellent, though the duties have been harassing. Our future movements will depend upon the reports received by the Deputy Commissioner.

From COLONEL H. F. DUNSFORD, C. B., Commanding Troops in Sylhet, to CAPTAIN E. K. O. GILBERT, Assistant Adjutant-General, Presidency Division,—(dated the 23rd March 1862.)

FOR the information of Brigadier-General Showers, C. B., Commanding the Presidency Division, I have the honor to report progress since the date of my last communication, dated 15th instant.

16th March.—Entered the Cossyah Hills from Jynteeahpore to Amwai Poonjee, a distance of twenty miles, accompanied by Lieutenant-Colonel Richardson and Major Rowlatt, leaving a Detachment of sixty-three Rank and File of the 44th Regiment Native Infantry under a Native Officer at Jynteeahpore. My former letter reported the arrangements I had made for the protection of the Southern portion of these Hills by the Detachment of the 28th Regiment Punjab Infantry, under the Command of Captain Robinson, and Detachments of the 44th Regiment Native Infantry at Moollagool and Gowaneghat.

17th March.—From Amwai Poonjee to Jowai, a distance of twelve miles, leaving a Detachment of thirty-four Rank and File under a Native Officer for the former place.

18th March.—From Jowai to the Villages of Chota and Burra Lattabur, the former a strong stockaded Village which had been previously carried by Lieutenant-Colonel Richardson, the latter deserted but not

stockaded as was represented, and consequently spared at the request of the Deputy Commissioner, whose policy it has been throughout to spare those Villages which have shown no menacing attitude, although the feelings and actions of the occupants may have been otherwise unfriendly. Returned to Jowai about sunset.

19th March.—From Jowai to Shamphong, about twelve miles. This Village had been strongly stockaded and been carried with severe loss to the Rebels by one of Lieutenant-Colonel Richardson's spirited attacks and was supposed to have been again placed in a state of defence, but I found it much the same as he represents it to have been left; a few shots and arrows fired on our pickets from the jungles at night, but without effect.

20th March.—Left Shamphong for Raliang at 9 A. M. and arrived about 11 before a strong stockade, covering the south-western front of the Village and extending semi-circularly about 250 yards. The entrance or gateway being in the centre, exactly in the road (a narrow foot-path) commanded by a flanking fire on each side, the Village being surrounded by dense jungle of forest and under-wood with deep ravines (or *korrungs* as they are here termed) immediately in front. The stockade consisted of a ditch about three feet wide and as many deep with a *chevaux de frise* of sharp pointed bamboos at the bottom and for many yards in advance of it. The earth from the ditch had been thrown up as an embankment to about six feet high, loop-holed and surmounted by thick closely entwined bamboos about the same height as the ditch. On approaching within 200 yards of the place I threw a Company of the 28th, and a Company of the 44th Regiment Native Infantry into skirmishing order with directions to turn the flanks, but this was found impracticable from the deep ravines to their front. Lieutenant-Colonel Richardson and Major Rowlett had given me the benefit of their former experience and cautioned me against an attack in front, which the Rebels were always prepared for and made their strongest and best defended position, the attack was consequently made on both flanks at once by the skirmishers and carried with the trifling loss of two men slightly wounded by arrows, and four by stakes of pointed bamboos. The Rebels dispersed down the ravines and dense jungles, and I at once sent out skirmishers in pursuit, but the density of the jungles renders such pursuit almost hopeless, and against men so lightly equipped and acquainted with every work and bye-path. We killed two Rebels within the stockade and three are reported to have been killed in the jungle; it is difficult to estimate the number opposed to us on this occasion, but I should imagine, from the sharp fusillade kept on us on our approach, the Rebels must have had about forty or fifty fire-arms, and have numbered in all from three to four hundred; the two killed in the entrenchment were armed with matchlocks and their weapons have been captured. The Village of Raliang is apparently a large and prosperous one; the houses good and well stored with rice in the husk; it will be destroyed on our leaving it, unless the ringleaders succumb. Bivouacked for the night in the Village, the pickets constantly fired on but without loss.

21st March.—Left Raliang with an escort of twenty-five men of the 28th Regiment Punjab Infantry, and the same number of the 44th Regiment Native Infantry, accompanied by Lieutenant-Colonel Richardson and Major Rowlett, to reconnoitre the Village of Munsow, a distance of about twelve miles; the country for the most part open and undulating with a tolerable road. An occasional shot from scouts from the jungles, but without effect. Got within about 300 yards of the stockade, which I found extended about a quarter of a mile from south-west to north-east along the crest of a high Hill with a flanking stockade running due east at the foot of the

Hill; the ravines on the east very steep but not very thickly wooded, those on the west steep and dense jungle. Returned to Raliang about sunset, the stockades of which were burnt during my absence.

23rd March.—Left Raliang, accompanied by all the Force at my disposal, at 8 A. M., leaving a strong rear Guard with instructions to burn the Town, and arrived opposite Munsow about eleven. Lieutenant-Colonel Richardson, with a party of fifty of the 28th Regiment Punjab Infantry, and fifty of the 44th Regiment Native Infantry, made a detour to the right to take the Rebels in rear if possible, with instructions to fire a volley as a signal on getting into position; a similar number of the same Regiment under my own personal Command were held in readiness for the assault in the north-eastern front. A party of fifty men, under Captain Buist, Adjutant, 44th Regiment Native Infantry, to make a false attack on the south, their strongest point, a party of twenty men under a Native Officer to scour the ravines and jungles on the west, and Lieutenant Bartleman, with fifty Sepoys of the 43rd Regiment Native Infantry, whom I had previously summoned to co-operate with me from Nurteng, to look out for stragglers on the north and north-west. All our arrangements were completed by twelve, and with every chance of success, when we found, on advancing, the place was completely evacuated and the extensive fortifications, which must have taken some eight hundred or a thousand men for about a month to construct, were left undefended. I have had men scouring the ravines and jungles all day, but from the extreme difficulty of the country the Rebels are enabled to effect their escape with impunity, and three of their number only have been killed. From their making no attempt to defend a stockade, which it has cost them so much labor and expense to erect, it may, I think, be inferred that they feel it now hopeless to contend against the Force brought against them. I intend to halt to-morrow to destroy the defences, and my subsequent movements will depend on the reports brought in of the Rebels.

The health and spirits of both Officers and Men in these harassing duties are excellent.

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FROM BRIGADIER-GENERAL ST. G. D. SHOWERS, C. B.,
Commanding the Presidency Division, to the Adjutant-General of the Army, (dated Head-Quarters, the 27th March 1862.)

I HAVE the honor to report, for the information of His Excellency the Commander-in-Chief, that I formed my Head-Quarters at this place on the 25th instant, and found that Colonel Dunsford, C. B., with the Force under his Command, had the day before returned from his expedition against "Raliang" and "Munsow," the Report of which I have submitted with my letter No. 29A. of the 26th instant.

2. I have now the pleasure to forward, for submission to His Excellency and for the information of Government, a Report from Major Rowlett, the Deputy Commissioner of the District, stating that the Rebels had dispersed in small parties, and that there is but little probability of their attempting any further combined resistance, and recommending that four or five of the principle Villages of the Rebels should be occupied by our Detachments, so as to afford any necessary aid to the Police in restoring the pacification of the District.

3. This successful result of our Military operations in the District is very satisfactory. It is to be attributed to the activity of Colonel H. F. Dunsford, C. B., immediately on assuming Command of the Troops, and to the previous operations of Lieutenant-Colonel W. Richardson, Commanding 44th Native Infantry.

4. I have already reported my opinion of Colonel Dunsford's expedition against the stockaded Villages of "Raliang" and "Munsow," and it is now my duty to bring to the favorable notice of His Excellency the spirited and well-planned assaults made by Lieutenant-Colonel W. Richardson and the small body of men

under his Command on the stockaded positions of "Jalong," "Munsow," "Latoober," and "Ooksaie." The conduct of both these Officers, with the Officers and Men under their Command, from the 28th and 44th Native Infantry, merit the approbation of the Commander-in-Chief and of Government.

5. As arranged with Major Rowlett, I have directed the Detachments of the 33rd Native Infantry, under the Command of Major Longmore and Lieutenant Walcott, to continue their march on the Villages of "Satongah" and "Bato," and on their occupying these positions they will maintain them until further orders.

6. The Villages of "Nurteng," "Munsow," and "Nongtalong" will also be held by Detachments from the 28th and 44th Native Infantry, and Colonel Dunsford, C. B., Commanding in the District, will have his Head-Quarters at "Jowai." These Detachments will have outposts in the Villages in the vicinity, and will send out parties to patrol the country, and it will be observed that the positions they occupy will command the whole of the disturbed portion of the District. They are generally within one or two days' march of one another, and no body of Rebels can be assembled, and no stockade built up, without being attacked by one or other of the Detachments.

7. As this is the second time the District has broken out against the State, I have to recommend that these Detachments should retain their posts throughout the rains.

From MAJOR E. A. ROWLETT, Deputy Commissioner of the Cossyah and Jynteah Hills, to BRIGADIER-GENERAL ST. G. D. SHOWERS, C. B., Commanding the Presidency Division,—(dated the 27th March 1862.)

As all the stockaded Villages of the Jynteah Rebels have now been taken, and the Rebels themselves have dispersed and become scattered in small bodies, there seems, I think, but little probability of their attempting any further combined resistance. All, therefore, that now remains to be done towards the pacification of the country is to occupy these Hills with Troops so as effectually to prevent the Rebels from rallying at any one particular point, and which can, I think, be best effected by placing Detachments of Troops at four or five of the principal Villages, and so distributed that should the Police require the support of the Military, some may be near at hand to afford them the necessary aid. At present the Police Force at my disposal is so limited that they, by themselves, can do but little. I have, however, received permission from the Agent to the Governor-General, North-East Frontier, to raise an additional Force for service in the Jynteah Hills, and as soon as they are organised they will be employed in apprehending the ringleaders; this done, there will be no chance of further disturbances taking place, and as the Rebel leaders are secured, the Troops might be gradually withdrawn, leaving, of course, a strong Detachment at Jowai, which must, as hitherto, be occupied by a Military Guard of sufficient strength to resist any attacks that could be made against it. I further am of opinion that it will be politic to keep a larger Force in these Hills than that stationed in them previous to the outbreak of the present rebellion, as the small numbers available for active operations at the commencement of the disturbances undoubtedly

encouraged the Rebels to resist, and induced many to join in the rebellion, who, if a greater display of Force could have been made at once, would not have ventured to do so.

2. As the above comprises the result of our conference of this morning, I trust you will do me the favor of issuing your orders for carrying the same into effect as soon as may be practicable.

From MAJOR HENRY HOPKINSON, Agent, Governor-General, and Commissioner of Assam, to the Secretary to the Government of Bengal,—(dated the 28th March 1862.)

I HAVE the honor to submit herewith a note which I have just received from Major Rowlett, as it is possible that being of late date it may reach you earlier than any intelligence he has forwarded the Government direct, and I should be glad that the Government received the earliest intimation that the troubles in Jynteah promised at length to be coming to a close.

2. It would seem as if the insurrection had died out, or was about to die out, pretty much in the way I reported to Government I thought it would, that the insurgents would give in out of sheer weariness without our having the opportunity of punishing them very severely.

3. I hope Major Rowlett's messenger will be in time to stop the advance of the Brigadier-General and the two Columns of the 33rd Regiment.

From MAJOR E. A. ROWLETT, Deputy Commissioner of the Cossyah and Jynteah Hills, to MAJOR HENRY HOPKINSON, Agent, Governor-General, North-East Frontier, and Commissioner of Assam,—(dated the 25th March 1862.)

JUST a line to say that we arrived here yesterday evening from Munsow; we remained there on the 22nd and 23rd, and have left a party of fifty men to prevent the Rebels from rallying again at that place; but as it was not defended I think they now see it is perfectly hopeless to hold out against us any longer, so as far as fighting goes the affair is, I believe, ended. I shall now direct my attention chiefly to getting hold of the ringleaders, and when they are secured, the country will soon settle down quietly. By yesterday's Dāk we received letters from General Showers telling us he had arrived at Cherra Poonjee, and would be here to-day; he told me he had ordered two Columns of the 33rd to enter the Hills, one *via* Murallee, and the other by Burghat. I hope they won't have got far before we shall be able to stop them, as it is quite unnecessary to have any more Troops sent into the Hills. As soon as the General arrives I shall try to get him to settle something regarding the position the stockade here should occupy; the present place is, I consider, untenable. Now, that these Khasseahs are beginning to use fire-arms, it must either be built at some other place here, or, if one is not procurable, at Nurteng. When this is acceded, I shall be able to answer your letter about the roads required in these Hills. I shall also try to get the General to go to Shillong, where I am very anxious to go to meet McRae, who, I hear, is to be there in a day or two. I am glad to see the Government wish to have the road carried on as quickly as possible. I think it must be passable all the way down by this time.



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, MAY 31, 1862.

OFFICIAL PAPERS.

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Government of Bengal, Public Works Department.

Coolie Labor—Assam.

From MAJOR HENRY HOPKINSON, Commissioner of Assam and Agent to the Governor General, to the Secretary to the Government of Bengal,—(dated the 15th April 1862.)

I HAVE the honor to report that for the last two months past some excitement is said to have arisen among the Coolies on the Tea Plantations in the Debrooghur District in consequence of the Executive Engineer of Upper Assam having suddenly raised his rates of wages from two annas to four annas per diem, and of the unwillingness of the Tea Planters to make a corresponding increase. At the same time the Planters are exceedingly dissatisfied with the proceedings of the Executive Engineer, because they fear that, unless they have recourse to what they regard as the ruinous measure of raising wages, their Coolies will strike work and they will have to close their Factories.

2. The whole question is very fully treated of in the annexed extract, paragraphs 4 to 40, from a letter No. 37 of the 26th February, which I have received from Major Bivar, Deputy Commissioner of Luckimpore, and I will now proceed to review such of his remarks as I think should not pass without notice.

3. Major Bivar starts* with explaining how the Assamese consider it a reproach to labor and to cultivate. I

* Paragraph 4. believe this to be owing to the degraded position which the laborer filled in days gone by in Assam, and that the way to remove the reproach and to make labor popular and respectable is to pay it well. Such a change will not be the work of a day, but the sooner general experience recognizes the fact that to be a Tea Planter's Coolie is to be

a well-to-do man, the sooner it will come. There are indications, indeed, that it is already at hand. In the course of the last two years the local labor to the Tea Planters has increased sevenfold.

4. I think the Estimate of available labor in paragraph 5 under the mark. The last census for Luckimpore returned the population at 94,500 souls, which should include many more than 5,000 able-bodied males. If this be really the number it is so small as to shew the cultivation of Tea cannot be carried on at Debrooghur on any considerable scale, except by imported labor, and with that the Executive Engineer does not interfere.

† Paragraphs 9 and 10. I find, however, that up to the present time there have been only 690 Coolies imported from Bengal into Luckimpore†.

5†. There is a great difference between the present rate of wages, stated to be Rupees 4-8 a month, and the rate formerly, Rupees 2-8; but Colonel Jenkins, two years ago, shewed that the rise was not attributable to the demand for labor at the Tea Factories, but that even in such a District as Cooch Behar there had been an equal rise, still Rupees 4-8 a month are very low wages; Rice and Teak afford more than twice that rate in Burmah; Sugar more than four times in Mauritius, and Tea is said to be the best paying thing of all. According to Major Bivar Luckimpore will produce in three years' time Tea to the value of £240,000, besides seed, and with no greater extent of cultivation than at present, the present cultivation employing between 3,000 and 4,000 hands, so that the labor of each Coolie will produce Tea to the value of 600 Rupees, upon which a charge of no more than 20 per cent, would give wages of ten Rupees a month.

6. In these paragraphs* Major Bivar reviews the progress making in his District by the Tea Planters on the one hand, with their cultivation, and the Executive Engineer on the other, with his roads and buildings; he then goes to shew that labor is more easily attracted to the Tea Plantations than to the Public Works Department, and that to counteract this preference the Executive Engineer has raised his rates to four annas and five annas a day,† the latter being the rate at which Major Bivar says the Government have determined to pay local labor before they sanction the employment of imported labor.

* Paragraphs 16, 17, 18, 19, 20, 21, 22, 23, 24, and 25.

† This is equivalent to Rupees 6-8 and 8-2 a month, not 7-8 and 9-6 as miscalculated by Major Bivar and the Tea Planters.

7. Hence the excitement among the working population; but holding out to them the prospect of higher wages it can scarcely be other than an excitement of a pleasurable kind, though accompanied, of course, by an impatience and uneasiness under the wages the Planters have hitherto allowed them.

8. Major Bivar reports‡ that Tea cultivation in Debrooghur cannot withstand such a ruinous competition as is implied in the raising the wages of Coolies to four annas and five annas a day, and that at this rate§ Luckimpore may be endowed with barracks, bridges, and metalled roads, but will lose all the "commercial prosperity"|| for the promotion of which improvements are needed, cultivation will be arrested, and "when our Pioneers in civilization are in the expectation of reaping the fruits to which their labor fairly entitles them they will be threatened with the loss of their reward,"¶ and the resources of the District will be checked in their development by being made "subservient to the requirements of the Public Works Department."***

|| See in original. ¶ Paragraph 29. *** Paragraph 31.

9. To avert the threatened calamity, Major Bivar proposes†† the introduction of the contract system for repairs of Government Buildings, all repairs to roads, and the "works of macadamization," and then he would let the Executive Engineer go as high as three annas a day; "and, with a view to afford the Department ample means for carrying out work, the importation of Coolies could be resorted to."†††

†† Paragraphs 32, 33, and 34. ††† Paragraphs 35 and 36.

10. Major Bivar next goes on to shew§§ that the rise in wages of Coolies in the Department of Public Works will injuriously affect the interests of Government by bringing about a rise in wages in all other classes.

§§ Paragraphs 38 and 39.

11. Finally, ||||therefore, Major Bivar respectfully urges that "that an increase to the current rates of labor should not emanate from Government."

12. The observations and arguments of Major Bivar referred to in the foregoing paragraphs, 6 to 11, of this letter strike me as being, in a great degree, characterized by a want of familiarity with some of the phenomena of the relations existing between wages and capital, and owing to which he has failed to appreciate what the essential conditions

are of the introduction of the cultivation of Tea into his District; by what means the cultivation can be extended; what the value of Tea cultivation is to his District, and to what extent and in what way the cultivation should be fostered and encouraged.

13. I have already had occasion to tell Major Bivar that the interests of his District and those of the Tea Planters are not identical at every point; the Tea Planter desires the utmost profits he can obtain from his cultivation, and as wages constitute his principle item of expenditure, it is his object above all things to keep down wages to the lowest rate. He already complains that wages have risen in Debrooghur from Rupees 2-8 to Rupees 4-8 a month within the last ten years, he would gladly therefore see wages again Rupees 2-8 a month, but that is not what any one having the welfare of the people at large would wish to see. It is not therefore by measures in restraint of the rise of wages that Planters should be encouraged.

14. The value of Tea cultivation in Debrooghur does not chiefly lie in the substitution of so many, Tea bushes for so much jungle; we might as well have no Tea there at all if we did not expect, from the expenditure of capital in its cultivation increased means of subsistence and comforts for the people and an influx of population attracted thereby. It is a confusion of means with the end to suppose that whatever promotes the increased growth of Tea must be desirable, and the argument for keeping a population at minimum wages and working them as slaves are nearly the same.

15. The total amount of Tea now under cultivation is 3,315 acres, and the number of Coolies employed 3,318; this number is equal to what Major Bivar has stated to be the whole available amount of labor in his District. It is certain, therefore, that cultivation can only be extended to any material extent by imported labor, and to how great an amount it will be required may be inferred when I state that three have been 20,143 acres taken up for cultivation by Planters already in the District, and it is not to be supposed that there will not be constant accessions to their number who will take up much more land. But the extension of the cultivation thus depending upon the importation of thousands of Coolies, it follows that the interference of the Executive Engineer in the local market for the few hundreds of Coolies he requires cannot have any great effect. In fact, so little dependence have the Planters been accustomed to place on the local market that only two years ago they brought it to the notice of Government that they had only 200 Coolies engaged who were natives of the Debrooghur District. I now find, however, that, notwithstanding the competition of the Executive Engineer, they have not far short of 1,500 Coolies belonging to that District, or seven times as many as they had only two years ago.

16. As Tea then cannot be cultivated in the Debrooghur District to an extent which would raise it to the importance of a staple article of produce without imported labor, and as imported labor will not be attracted to Debrooghur without high wages, very high wages indeed, looking to the many disadvantages of its position in the eyes of the natives of India, it follows that the essential condition of the successful cultivation of Tea in Debrooghur is that its profits shall be able to afford high wages, wages which may be expected

to reach a higher figure than the rates which the Executive Engineer has hitherto offered. If the cultivation of Tea cannot stand something better in the shape of wages than Rupees 4-8 or 5 Rupees a month, no assistance that the Government can give in the way of protection, as by stopping Public Works, will allow it more than a very dwarfed existence.

17. I am, however, sanguine that the cultivation of Tea in the Debrooghur District can afford much higher wages than have hitherto been paid. As Tea Factories are now carried on there, the total charges, exclusive of an inappreciable fraction for iron pans, hoes, dhās, and pruning knives, are simply no more than the total cost of Coolies employed, in other words the total wages paid is the total cost of manufacture; and I find that in the year 1861 certain of the Tea growers in Debrooghur employed 300 Coolies on 400 acres in the manufacture of 15,000 maunds of Tea or rather more than one-fourth of the total quantity produced in the District, the value of which, at Rupees 40 a maund on the spot before packing, and no Planter of good credit would take less than this for his Tea all round, would be Rupees 60,000; we have therefore 300 Coolies producing Tea to the value of Rupees 60,000, of which, if even so much as one-half were reserved as profits, there would remain Rupees 30,000 to be divided between 300 Coolies or Rupees 100 a man, equal to Rupees 8-5-4 a month, but to the value of the Tea leaf, I have also to add 400 maunds of China and 200 maunds of Assam Tea seed, worth at least Rupees 24,000, so that the wages of the Coolies come really to but little more than a third of the gross profits.

18. The foregoing calculation may be contested; but I will answer for it that no Planter who had a Plantation to sell would admit that my estimate of profits was excessive. It will be noticed that I have taken Plantations yielding under four maunds an acre, and a good garden in full bearing should produce as much as eight maunds an acre.

19. The Planters are not so unreasonable as to expect advantages which could not possibly co-exist; the facilities in procuring land implied the difficulties in procuring labor. The country could only furnish land because it could not provide labor, and it is to be regretted that a scanty supply has hitherto prevented the full recognition of this fact. Let it be now frankly and thoroughly admitted and acted on, and the era of real progress in Tea cultivation in Debrooghur will have commenced, and if it is the competition of the Public Works Department that brings the change about, I believe that it will be hereafter allowed that it was one of the best things the Department ever did. A rise in wages never yet injured any agricultural or industrial undertaking that had any real pith in it, and which was really congenial to the country in which it took its rise. I would ask the Tea Planters to let the Executive Engineer take his own course, and, disdaining any further reliance on local labor, to engage vigorously in promoting an efficient system of immigration and the passing of a contract law.

20. In regard to what Major Bivar says about an increase of wages affecting Government interests, I imagine that Government would not regret additional expenditure on this account, springing, as it would, from a state of affairs which

promised the redemption of Upper Assam. If every able-bodied Coolie were earning his ten Rupees a month in Debrooghur it would soon become as flourishing a colony as Maulmein.

21. I do not therefore accept Major Bivar's summing up that the Government should not do any thing to increase local wages; at the same time with reference to a representation from the Tea Planters to Major Bivar, I have directed him to assure them that, under all circumstances, Lieutenant Nolan will not be permitted to give more than the necessary rate of wages, and that no Officer of Government would entice Coolies away from private persons, or employ Coolies who were otherwise than free from engagements to any body else; and I further added that the Government were as anxious to obtain their labor in the cheapest market as the Planters, and that I have been informed that the Department of Public Works would import the labor they require from Bengal as soon as they found that they could get it cheaper in that way than from local sources. I also instructed Major Bivar that if he thought Lieutenant Nolan had been paying too high for his labor that he was to let Lieutenant Nolan know what the proper rates were, and if Lieutenant Nolan could not procure Coolies himself at the rates Major Bivar fixed, and sought his assistance, he was to procure them for him. I shall also instruct Major Bivar to proceed in the same sense in the matter of giving effect to the suggestion he makes about working by contract in the Public Works Department at Debrooghur.

Extract of a letter from MAJOR H. S. BIVAR, Deputy Commissioner of Luckimpore,—(dated the 26th February 1862.)

4th. The Assamese as a class consider it a reproach to handle the hoe, and, except for their personal necessities in the work of cultivation, they avoid labor, and this feature in the character of the aboriginal population, coupled with the consideration that the settlers, the foreign element amongst the inhabitants, such as "Kamptes," "Singphos," "Doonaeahs," "Kamjangs," "Takeeahs," "Meerees," "Abors," and "Mishmees," rarely, if ever, bring their labor into the market, reduces considerably the numbers of the *bonâ fide* laboring population.

5th. I am of opinion that, by giving the greatest latitude to calculation, the laboring class in Luckimpore cannot be assumed to be more than 5,000 able-bodied males, and out of this number little more than two-thirds can be said to be available.

6th. The second point for consideration "whether the labor is redundant or otherwise," and the current rate of wages, has in a measure been replied to in the first.

7th. The number of laborers, as I have demonstrated, is small, and considering the extent over which it is spread, the District of Luckimpore, covering an area of over 4,000 square miles, it is more trifling than numbers make it appear.

8th. On the South side of the District, the Sudder Division in Muttock and where the Tea Plantations which employ labor are situated, not more than 1,500 laborers could be found to supply the labor market, and in North Luckimpore 2,000 would be about the mark.

9th. The small amount of local labor is one of the drawbacks of the District, and to remedy

it the Planters are obliged to import workmen Coolies from Chota Nagpore and from Lower Bengal.

10//. The imported laborers are obtained from the "Dangar" and "Boonooah" castes, and these people, although they reach Debrooghur in a weak miserable state, owing to the confinement and privations consequent upon a long journey by Steamer, soon pick up when once settled on the Plantations and work well.

11//. With respect to the rate of wages this is a subject upon which I have somewhat to say, and which carries with it some very weighty considerations.

12//. Formerly the normal rate of wages for labor was Rupees 2-8 a month or 5 pice a day, which over the last ten years, consequent upon advancement and prosperity which has, in great measure, been brought about by the establishment of Tea Plantations in the District, the hire of laborers up to date has increased to Rupees 4-8 for monthly wages, and 2 annas per diem for daily work.

13//. There are at present twenty seven Tea Plantations in the District, and there is room for more. The Planters give employment to between 3,000 and 4,000 hands, and although they are obliged to have recourse to importation, yet they have experienced no difficulty in obtaining labor available from local sources at Rupees 4-8 per mensem.

14//. The manufacture of Tea from 92,000lbs in 1852 has risen to 3,80,000lbs in 1861, and in three years time, with no greater extent of cultivation than at present, an outturn of not less than 3,000,000lbs of Tea, worth £240,000 sterling, will be obtained.

15//. In addition to the value of Tea material as seed is not insignificant produce, and with the prospects of the District as they now stand, exports over a quarter of a million sterling may be looked for shortly and it will not stop there, but if encouraged will continue to increase to what must be admitted will be a mighty trade in so remote a District as Luckimpore, the *Ultimo Thule* of the British Empire in the North-East Frontier.

16//. The encouragement which is afforded to enterprise in Tea by the liberal manner in which the question of the sale of waste land and the redemption of the Land Revenue has been dealt with by the Supreme Government is most cheerful, and clearly evinces the sense of importance which is entertained by Government as to the prosperity which will be induced by promoting commercial operations.

17//. To assist the development of the resources of the country roads are required; something has been done, and it is in contemplation to effect much more.

18//. Roads to facilitate internal communication in the District are springing up in every direction. The Planters render willing aid for the execution of these works. The questions as to more important trunk lines of road throughout the Province are now under consideration, and the local administration have invited discussion on the point and have asked for the opinion of the Public in the matter.

19//. Every one is agreed upon the benefit which will result from the establishment of good roads, and the Planters, in the prosecution of whose business roads are especially needed, see encouragement in the action of Government in such matters.

20//. So far so good. Roads, the object of common interests, seem within our grasp when a difficulty, a serious one, shews itself.

21st. The work of carrying out extensive lines of metalled road, as a matter of course, devolves on the Government Officer in the Public Works Department. The Executive Engineer, Upper Assam, receives instructions to enter upon the task of carrying out important improvements. Pursuant to his orders he surveys the line of roads to be macadamized and makes plans for bridges; he has moreover* to build barracks for the European Troops, to execute repairs to existing Public Buildings, and manifold other works to carry out, and to give effect to all the tasks which devolve on him he needs a considerable amount of labor.

22nd. I have demonstrated how very restricted the available local labor is, that it is insufficient for the commercial necessities of the District, and that the Planters are obliged to import Coolies for their operations. Of course the Executive Engineer has to encounter the same difficulty as the Public in general as to scarcity of labor, and he has moreover greater disadvantages than the Planters to encounter, as the local laborers prefer Plantation work, where their families can be employed in picking Tea leaf; moreover, in clearing jungle the Coolies obtain firewood "gratis," and can remain near their homes, and the consequences are that the Executive work is greatly impeded, for want of workmen, if not stopped.

23rd. The Executive Engineer, to remedy the disadvantages under which he labors, applies for Convict labor to carry out works and recommends importation of laborers. The Government have granted sanction to a limited extent as to the former measure, orders having been issued for Convicts in the Jail at Debrooghur to be furnished to the Public Works Department for any special work; but with respect to the latter question it has been determined that, until

* I wrote what has come to my knowledge orally.

the offer of five* annas per diem, being Rupees 9-6 per mensem, has failed to secure

local labor for the Public Works, Government will not import.

24//. I have had occasion, in my semi-monthly Report, letter No. 19 of 15th instant, in referring to the state of the feeling in the District, to bring to your notice the excitement which has risen on the question connected with the increase in the price of labor. The Executive Engineer, with a view to give effect to his duties, has already offered higher wages, is introducing four annas per diem or Rupees 7-8 per mensem as the rate for hire in his Department, but this innovation, however well intended, is a matter for serious apprehension.

25//. The Planters, for whose benefit, with the Public in general, works of improvement are being undertaken, view with alarm the means taken to give effect to plans for their advantage.

26//. The fair prospects which now appear in the future of Luckimpore are threatened by the determination of the Executive Public Works Department, to increase the rates of hire for labor from two to five annas per diem, and, unless the Planters are prepared to enter into ruinous competition, the Executive Engineer, with the Government purse at command, can carry off all the local labor.

27//. By enhancing the rate of wages the Public Works Department will build barracks,

construct bridges, and metal roads; but commercial prosperity, for the promotion of which the improvements are needed, is checked by the derangement in market rate of hire for labor.

28th. Luckimpore is yet but a growing District, and it needs careful consideration as to its future.

29th. Within the last ten years the dreary waste which encumbered the country on all sides has yielded to energy and enterprise. What was formerly a howling wilderness is fast being converted, as you had occasion to remark a short time since, into a beautiful productive garden. This has not of course been brought about without large outlay of capital, and when our Pioneers in civilization are in the expectation of reaping the fruits which their labor fairly entitles them to, they are threatened with the loss of their reward.

30th. The question of enhancement of the rate for labor appears to me a matter of such vital importance to the future interests of the District under my charge, that I would most earnestly solicit that the measure being carried out by the Executive Engineer should be put a stop to until the subject has been re-submitted for the consideration of Government.

31st. The matter as it stands appears to resolve itself to this, namely, as to whether it is expedient to allow the resources of the District to develop themselves to the extent I have portrayed or to place a check upon them by making them subservient to the requirements of the Public Works Department.

32nd. Having noticed what has occurred to me as pertaining to the questions which present themselves in connection with the rates of labor, it will not, I think, be out of place to offer a remark as to the requirements of the Public Works Department for labor, and to venture a suggestion to remedy the disability which exists.

33rd. Should my proposal to put a stop to the action of the Executive Engineer in disturbing the value of labor meet with approval, I would recommend that the contract system for repairs of Government Buildings and all ordinary Public Works, as enjoined by the Chief Engineer of Bengal in his Despatch, dated 22nd January 1862, published in the Supplement of the *Gazette* No. 4, page 17, should be strictly adhered to.

34th. I cannot say to what extent Ensign Nolan, now Executive Engineer, Upper Assam, may have recourse to the "Contract System;" but I know that Colonel Reid when he filled the office at Debrooghur had much of his work done by contract, which, on the whole, I think, I am right in assuming, answered well. All repairs to roads, and even the work of macadamization, might, I conceive, be easily carried out by contracts, and brick making for bridges or roads could in like manner be provided for.

35th. For work in the Station of Debrooghur for skilled labor the Executive Engineer might give a slight increase as far as three annas per diem for daily wages, or Rupees 5-8 per mensem for hire by the month; but for all other labor he should not exceed the current rates, and, with a view to afford the Department ample means for carrying out work, the importation of Coolies, which I believe was contemplated, could be resorted to.

36th. The Planters contrive to import labor and to make it pay, and there is no reason why the Executive Department should not do likewise,

and with greater facility, as it might command the co-operation of Government Officials who are located in the Districts from whence Coolies are imported.

37th. Apart from the question of disadvantages in a commercial point of view, which would result from disturbing the labor market, the derangement which would arise from exorbitant increase in the wages for labor would materially affect the Government interests.

38th. Once the value of labor assumed so high a figure as five annas per diem, or Rupees 3-6 per mensem, all Public servants who belong to the laboring class would hold out for higher pay, Jail Burkandauzes, Police Burkandauzes, Office Tek-lahs, Chupprassies, Dāk Peons, Dāk Runners, Boatmen, and the like, who now work for wages of from 4 to 5 Rupees per mensem, would not be obtainable for double that sum. The evil, moreover, would not rest here, it would make the native soldiery, who receive, the regular Sepoy Rupees 6-8, and the Militia man Rupees 5-4, feel dissatisfied, and servants and menials who belong to the Military Train, Mahouts, Grass-cutters, Bullock-drivers, Classics, Cooks, Mussalchees, Hospital Bearers, and Sweepers, would expect an increase to their wages.

39th. I would remark further that an increase in the value of labor affects all classes of the tax-paying community who need labor or servants, and hence their earnings become indirectly taxed, and with respect to persons who have fixed incomes they must, to a certain extent, be impoverished by a sudden rise in the rate of hire for work.

40th. For reasons I have ventured to explain I would respectfully beg to urge that an increase to the current rates for labor should not emanate from Government.

FROM LIEUTENANT-COLONEL J. P. BEADLE, Officiating Secretary to the Government of Bengal, in the Public Works Department, to the Officiating Commissioner of Assam,—(dated Fort William, the 15th May 1862.)

YOUR predecessor's letter No. 43, dated the 15th April last, referring to the excitement which is said to have arisen amongst the laborers on the Tea Plantations in Upper Assam at the action taken by the Public Works Department in raising the wages of Coolies employed on the Government Works, explaining his views on the labor question, and stating the instructions he has issued to the Deputy Commissioner of the Luckimpore District, has been placed before the Lieutenant-Governor, who agrees generally in the views expressed by Major Hopkinson, and in the instructions given by him to Major Bivar.

2. The Lieutenant-Governor is of opinion that, considering the small number of laborers required by the Public Works Department in Upper Assam, as compared with the probable number of the able-bodied male laboring population on the one hand, and the demand for labor in the Plantations on the other, the rate of wages lately offered by the Executive Engineer is not so high as to have done, or to be likely to do, any injury to private interests.

3. So far as the Public Works Department is concerned the Government is certainly as much interested as any private person in the cheapness of labor; but the Lieutenant-Governor cannot consent to restrict the progress of works of public

utility, especially of roads and other works of a re-productive character, for fear of raising wages. The result which has followed the introduction of capital into Bengal must inevitably attend the introduction of capital into Assam, and wages must rise, independent altogether of the action of Government, until the investment of further capital becomes for a time unprofitable, or until the proportion between the number of the laboring population, and the funds devoted to the purchase of labor, adjusts itself.

4. At the same time the Lieutenant-Governor admits that the Government having, so to speak, an unlimited command of capital, and being practically far less dependent on considerations of profit and loss than the private capitalist, is bound to be very careful not to take the lead in raising wages, or to offer (except on an extreme emergency) inducements to laborers to leave their ordinary employment by the expectation of obtaining a

higher remuneration for their labor than the ordinary market rate.

5. The Government is also bound, the Lieutenant-Governor conceives, no less by a view to public economy, than by a due regard to the private interests, both of the Assam capitalists and of those who seek, or desire, a better market for their labor, to facilitate the introduction of laborers into Assam from other parts of India where labor is cheaper; and not only to encourage immigration through private agency, but to take direct action in the matter so far as the requirements of the Public Service demand it. This, I am to state, has already been done to a certain extent, and the Lieutenant-Governor is quite prepared to carry the measure further if necessary.

A copy of the correspondence will be forwarded to the Superintending Engineer of Assam for his information: It will also be published in the *Gazette*.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JUNE 11, 1862.

OFFICIAL PAPERS.

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Foreign Department.

Abolition of Transit Duty on Cotton in Native States in Bundelkund.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Camp Gwalior,—(dated Camp Duttia, the 24th February 1862.)

I HAVE the honor to forward copies of

1. Nawab of Baonee, dated 27th Jumadoos Sani, Hijree 1278, A. D. 30th December 1861.

2. Jagheerdar of Paharee, dated 2nd Poos Soodhi, Sumbut 1918, or 2nd January 1862.

3. Rajah of Beronda, dated 10th Magh Soodhi, Sumbut 1918, or 9th February 1862.

4. Rais of Kotee, dated 14th Magh Soodhi, or 13th February 1862.

5. Jagirdar of Gourihat, dated 15th Magh Soodhi, or 14th February 1862.

dated.

2. The Nawab of Baonee was the first under this Agency to abolish the Duty, and for this, as well as his good conduct generally in matters relating to Transit Duties, I think it would be a merited and beneficial notice of the matter were you to send me a letter for him expressing your satisfaction.

3. With regard to the other Chiefs also, I trust you will either do this or authorize me to signify your approval to them.

4. The States mentioned in this letter are only small ones, but the abolition even in them is useful as a beginning, and I see no reason why all the Chiefs should not be induced to do likewise.

letters received from the following Chiefs of Bundelkund abolishing all Transit Duty on Cotton in their States. I have placed them in the order in which the letters are

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Camp Gwalior,—(dated Camp Duttia, the 3rd March 1862.)

IN continuation of my letter No. 38 of 24th ultimo, I have the honor to forward copy of Khureeta, dated 28th February, to my address, from the Ranee of Sumpthur, abolishing all Transit Duty on Cotton.

2. I hope you will favor me with a letter for the Ranee, signifying your approval, especially as the Sumpthur Territory occupies an important position on the imperial road from Saugor *via* Jhansi to Calpee and Cawnpore.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Camp Morar,—(dated Camp Morar, the 26th March 1862.)

I HAVE the honor to forward copy of Khureeta from the Ranee Regent of Tehree, to your address, dated 5th Chait Budhi, Sumbut 1918, intimating the total abolition of Transit Duty on Cotton in the Tehree State.

2. The Ranee mentions that though loss in Revenue will accrue from the remission, she has determined on the measure on account of the benefits to be expected therefrom to the people, and because she believes it will be agreeable to Government, the wishes of which she is always desirous of meeting.

3. I ought to mention that this Khureeta has been sent by the Ranee without my having to write desiring the remission, though I have of course talked on the subject with her Agent.

4. As Tehree is the oldest and head State in Bundelkund, the example set by the Ranee is more important than could be offered by any other State in this Province. The Raj is very poor also, and therefore the sacrifice is the greater. The remission was resolved on and promised some time ago, but I have only got the Khureeta today.

5. I trust an approving notice may be taken of the Ranee's proceeding by yourself and Government.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Camp Morar,—(dated Camp Morar, the 29th March 1862.)

I HAVE the honor to forward copy of Khureeta, to my address, dated 16th instant, from the Ranees of Chutterpore, intimating that Transit Duty on Cotton has been entirely abolished in the Chutterpore State.

2. You are aware that Chutterpore itself is an important Commercial Town on the old and direct Cawnpore and Saugor Road.

3. I beg to bring to notice that this Khureeta has been sent by the Ranees without my having to write desiring the abolition.

4. As mentioned in former Reports, I conversed on the subject with the various Vakeels some time ago.

5. I will enquire and subsequently report the amount of the Duty thus abolished, as information on this point has been called for.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Camp Morar,—(dated Camp Morar, the 30th March 1862.)

I HAVE the honor to forward copies of the papers to my address, below noted, intimating the abolition of Transit Duty on Cotton in the States of Ajigurh, Bijawur, and Logassee :—

1. Khureeta from Ranees of Ajigurh, dated 23rd February 1862.

2. Khureeta from Raja of Bijawur, dated 2nd March 1862.

3. Khut from Jagheerdar of Logassee, dated 2nd March 1862.

2. Like the others already forwarded, these papers have been sent from the States without further communication on my part than conversing with the Vakeels and informing the Chiefs of the abolition elsewhere.

3. From the dates of these papers, it will be seen that they might have come earlier to hand, but they have only reached me today, owing to my separation from the chief part of my Camp.

4. Ajigurh Territory is traversed by the Road from Saugor *via* Dumoh, Lohargaon, Nagode, and Rewah, to Allahabad or Mirzapore.

5. Bijawur has a considerable town, Goolgunge, and attached territory on the old and direct Saugor and Cawnpore Road.

6. Logassee is traversed on this last Road, when the route from Chutterpore *via* Teetpore, Chandout, &c., is taken, and is also on the road from Jhansi or Nowgong to Banda.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Camp Morar,—(dated Camp Morar, the 1st April 1862.)

I HAVE the honor to forward copy of Khut dated 6th Chait Budhi, Sumbut 1918, (21st ultimo), from the widow mother of the late Jagheerdar of Behree, intimating the abolition of Transit Duty on Cotton in that Jagheer.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India,—(dated Camp Morar, the 2nd April 1862.)

I HAVE the honor to forward copy of Khut dated Phagun Sudhi 10th, Sumbut 1918, from the Jagheerdar of Puldeo, the Principal of the Kalinjer Chowbey Jagheerders, intimating the abolition by him of all Transit Duty on Cotton in his Estate.

2. He mentions that as three of his villages are in the possession of female members of his family, who obstruct the free exercise of his authority in them, he cannot answer for the exemption as regards those villages.

3. As, however, these villages are part of his Jagheer and the females only have them for their maintenance and not for the exercise of independent authority, the question of exemption lies with the Jagheerdar, and I have taken means to secure the exemption also in the villages referred to.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India,—(dated Camp Duttia, the 4th April 1862.)

I HAVE the honor to forward copy of a Khut, dated 15th ultimo, from the Jagheerdar of Kampta Rigola, intimating that he has abolished all Transit Duty on Cotton in his Estate, which is one connected with those of the Chowbey Jagheerders.

From CAPTAIN E. THOMPSON, Officiating Second Assistant Agent, Governor-General for Central India, on Special Duty, Duttia, to J. P. STRATTON, Esq., Political Assistant, Bundelkund,—(dated Camp Duttia, the 4th April 1862.)

I HAVE the honor to forward copy of a Khureeta from the young Raja of Duttia, expressive of his anxiety to remit the Duty on Cotton throughout his State, with a view to encourage its more extended cultivation, and requesting me to issue orders accordingly to the Durbar.

2. This step having been taken with the concurrence and by the advice of the Members of the Durbar, I have given them authority to intimate throughout the District that Cotton shall pass free of Duty.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India,—(dated Camp Duttia, the 5th April 1862.)

I HAVE the honor to forward herewith copy of letter, No. 25 of 4th instant, from Captain Thompson, on Special Duty at Duttia, and of its enclosed Khureeta, to his address, from the young Raja of Duttia, dated 1st instant.

2. In the Khureeta the Raja states that hearing of the relinquishment of the Duty in various Native Districts he desires, with the advice and concurrence of his advisers and the Durbar, that a measure of such benefit for the people should also be carried out in the Duttia State. Orders have on this been at once given for the abolition of the Duty by the Durbar under Captain Thompson's superintendence.

3. The high road from Jhansi to Gwalior traverses the Duttia State, and as this State is at present greatly embarrassed, I think the Rajah's proposal very creditable to him, and I trust he may be favored with your commendation. I ought to add that beyond discussing verbally the advisability of the measure generally, and intimating the abolition in other States, I have not had to make any written or direct application to the Raja or Durbar for the remission.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Indore,—(dated Nowgong, the 2nd May 1862.)

I HAVE the honor to forward copy of Khureeta, dated 25th ultimo, from the Raja of Punnah, intimating the abolition of Transit Duty on Cotton in his Territory.

2. As the Punnah State is traversed by at least three considerable routes, *viz*—

1st.—Old and direct Saugor and Cawnpore Road *via* Chutterpore.

2nd.—From Saugor and Dumoh to Rewah, Allahabad, or Mirzapore, whether by Nagode or a more southern tract.

3rd.—From Banda to Myhere and Jubbulpore, *via* Nagode—

3. The abolition is a matter of importance.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Indore,—(dated Nowgong, the 24th April 1862.)

I HAVE the honor to forward copy of Urzee from the Managers of the Chirkaree State, dated 15th instant, stating that orders for the complete abolition of Transit Duty on Cotton have been issued in that Territory, and explaining that they as Managers did not like to act otherwise than to continue matters set on foot by the late Raja, or obey injunctions from Government, and that

but for this the Duty would have been abolished previously without waiting for an intimation of the wishes of Government.

2. As the Managers were appointed by the late Raja, the abolition is quite valid, but as occasionally the Durbar sends communications in the form of a Khureeta from the young Raja, I think the present would be a suitable occasion for such a form in addition to the Manager's letter, and I will let them know this.

From J. P. STRATTON, Esq., Political Assistant for Bundelkund, to MAJOR R. J. MEADE, Agent, Governor-General for Central India, Indore,—(dated Nowgong, the 5th May 1862.)

WITH reference to (especially the concluding part of) my letter No. 108 of 24th ultimo, sending copy of an Urzee from the Managers of the Chirkaree State abolishing the Transit Duty on Cotton on that Territory, I beg to forward copy of Khureeta, dated 28th ultimo, to the same effect, from the young Raja of Chirkaree.



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, JUNE 14, 1862.

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Home Department.

Cotton Cultivation in America.

The following Despatch from the Right Hon'ble the Secretary of State for India is published for general information:—

From the RIGHT HON'BLE SIR C. WOOD, BART., G. C. B., Secretary of State for India, to His Excellency the Right Hon'ble the Governor General of India in Council,—(No. 8, dated London, 8th May 1862.)

I FORWARD herewith, for your Excellency's information, copy of a Despatch* from Her Majesty's Consul at Charleston, to the Right Hon'ble the Secretary of State for Foreign Affairs, respecting the prospects of the Cotton Crop in the Southern States of America during the present year.

From ROBERT BENCH, Esq., to the EARL RUSSELL,—(No. 49, dated Charleston, 19th March 1862.)

THE deranged condition of Postal and other communication between the various States and Districts of the so called Southern Confederacy renders it difficult to speak with entire certainty on a subject of considerable interest, viz., the prospects of the Cotton Crop of this year, or rather as to whether there will be any Crop at all.

Of the Districts in my own more immediate neighbourhood I can indeed say confidently that

the production of Cotton will be next to nothing unless some great change in political affairs shall occur within the next two months. This does not appear probable. The Planters, who have not yet felt the effects of the invasion, are employing their hands in sowing corn and other cereals, of which enormous quantities will be required now that the grain market of the North-West is closed.

The "Sea Islands" may be said to be entirely in the possession of the United States. Whether those lands are being prepared for crops under northern auspices I am unable to say, but it is certain that at the best the product will be small. The Negroes are too thoroughly disorganized, and the whole system of labor too much changed to render immediate success possible.

In the South-Western States and the Valley of the Mississippi the operations of War, of which they are now the theatre, must preclude any but the most haphazard attention to agriculture, and, even in Districts which may have been up to now comparatively quiet, I feel assured that but little Cotton will be planted. Corn and grain will monopolise the land.

I have therefore no hesitation in avowing my belief that Europe need look for but little Cotton, the growth of this year. Even were it possible that the restrictions on its shipment could be at once removed by the cessation of the blockade, the demands upon the Railroads for Military services, the conversion of River Steamers into Vessels of War, the destruction of Canals, Bridges, and Roads must operate adversely for a considerable period upon the transportation of the staple from the interior to the coast. It may be confidently predicted that no competition on the part of the South need, for the present, be feared by other Cotton-producing Countries.

*Financial Department.***Organization of a Statistical Department.**

Extract from the Proceedings of the Government of India, in the Financial Department, under date the 6th June 1862.

READ again Financial Resolution No. 84, dated 13th May 1862.

In this Resolution the preparation of Commercial and Financial Statistics was referred to as one of two objects to be kept in view in the re-organization of the Financial Department.

There is, His Excellency the Governor General in Council observes, a mass of Statistics in the Administration Reports of the different local Governments and among the Records of the various Government Offices, but they are not compiled on any uniform plan nor brought together in any Central Office, so as to shew the Statistics of the Empire.

It is very obvious that it would be greatly for the advantage both of Government and of the Commercial community to have a regular methodical compilation and annual publication of such Returns of Trade, Navigation, and Finance as are published in England by the Board of Trade and the Treasury, and such compilation and publication would, in the opinion of His Excellency the Governor General in Council, be best effected in the Financial Department, which would have most need for Statistical information and has large experience in compiling Statements and Returns received from all parts of India.

The Financial Department must, however, His Excellency in Council observes, be careful to make no demand for Statistical information except from its own Officers, without first ascertaining from the Department of Government concerned whether it can be obtained without overloading public Officers with extra work. As a general rule, the fewer details required, the more valuable and correct will be the information. An intelligent Officer could often himself give a concise Report of the general features of trade in his District, which would be accurate and valuable, while, if he were called upon for complicated Returns, he must leave them to careless subordinates or neglect more important duties.

The Returns of the English Board of Trade should, His Excellency in Council is of opinion, be taken as the basis of action, and each head gone through to see how far it is applicable to India without entailing any serious trouble or expense. Endeavors should be made to induce the different local Authorities to keep their Statements in the uniform Forms thus adopted, or, if kept differently for local convenience, to reduce their figures of measure or value to a common standard.

The Chamber of Commerce will, His Excellency in Council believes, gladly give valuable assistance as to Commercial Statistics. Other branches of Statistics of natural importance might be gradually added, as of population like those of the English Registrar-General and Agricultural Statistics, but this should only be done cautiously, and the Government will abstain from any thing like merely Scientific Statistics, confining itself to

those which have an immediate bearing on practical legislation and Government.

A Statistical Society aided and encouraged by the Government, but self-managed and voluntary, would be a most useful adjunct to any scheme of Official Statistics and would embrace many fields of useful and interesting enquiry which a Government could not undertake, while the advice and assistance of its leading Members would be of great use in assisting the Government to frame its own Returns and direct its own enquiries.

Offers of aid have been received from some gentlemen who contemplate the formation of such a Society, and, as a first step towards the practical attainment of the above objects, His Excellency the Governor General in Council is pleased to appoint a Committee consisting of

The Hon'ble Mr. Erskine,
" " " Bullen, and
Mr. G. Smith,
and
The Hon'ble E. Drummond,
Mr. Grote, and
" E. C. Bayley,

as representing the Government (with power to add to their number) for the purpose of revising the Board of Trade and other Official Returns, and of reporting to the Government as to the Forms and Regulations which they would recommend with a view to the compilation of an uniform system of Imperial Statistics in the newly created Branch of the Financial Department.

*North-Western Provinces and the Punjab.***Report on the Tea Plantations in the North-Western Provinces and the Punjab for 1861.**

From WILLIAM JAMESON, Esq., Surgeon-Major, Superintendent, Botanical Gardens, North-Western Provinces, to SIR G. COUPER, BART. AND C. D., Secretary to the Government of the North-Western Provinces, Allahabad, (dated Botanical Garden, Saharunpore, 12th May 1862.)

SIR,—I HAVE the honor to lay before you, for the information of the Hon'ble the Lieutenant-Governor, a detailed Statement shewing the manner in which the Government Tea Plantations have been worked and the results obtained during the last season.

2. For some time during the season I was absent from my duties, bad health having compelled me to visit Europe on Medical Certificate. During my absence my work was actively and energetically conducted by Dr. J. L. Stewart. To him I made over charge on the 1st of March, sailed from Calcutta on the 24th of March, and returned again on the 1st of November, and resumed my office on the 21st of November.

3. The outturn of Tea during the last season shews a decrease on that of the former year, caused by the great drought during the cold weather and months of April and May. The grain crops throughout the upper part of the Doab were a failure, it ought not therefore to be a

matter of surprise that the yield of Tea shows a decrease, particularly as the chief or first crop of leaf almost entirely failed. Considering this, the decrease may be considered small, and shewing how admirably the plant is fitted for the Kohistan of the North-Western Provinces and Punjab.

4. The quantity of Tea prepared in the Factories was as follows :—

KOWLAGHIR FACTORY IN DEYRAH DHOON.

Green Teas.

	lbs.	oz.	d.
Gunpowder	199	0	0
Imperial Gunpowder	182	0	0
Hyson	150	0	0
Young Hyson	386	0	0
Hyson Skin	817	0	0
	1,734	0	0
Samples sent to Exhibition	21	0	0

Black Teas.

	lbs.	oz.	d.
Souchong	4,846	0	0
Fine Ditto	1,853	0	0
	6,699	0	0
Pouchong	3,244	0	0
	3,244	0	0
Bohea	3,284	0	0
	14,982	0	0

PAOREE FACTORY IN GURHWAL.

Black Teas.

	lbs.	oz.	d.
Souchong	2,697	0	0
Pouchong	2,850	0	0
Bohea	4,700	0	0
	10,247	0	0

BHINTAL FACTORY IN KUMAON.

Black Teas.

	lbs.	oz.	d.
Souchong	1,129	0	12
Pouchong	64	0	12
Bohea	75	0	0
	1,269	8	0

HAWUL BAGH FACTORY IN KUMAON.

Green Teas.

	lbs.	oz.	d.
Fine Green Tea	521	0	0
Hyson Skin	880	7	0
	1,401	7	0

Black Teas.

	lbs.	oz.	d.
Souchong	2,707	8	0
Bohea	2,952	8	0
	5,660	0	0

AYAR TOLI FACTORY IN KUMAON.

	lbs.	oz.	d.
Souchong	7,103	8	0
Bohea	856	8	0
	7,960	0	0

Total lbs. 41,519 15 0

Shewing a Grand Total of lbs. 41,519 15 0

5. But if there has been a small decrease in the quantity of Tea it has been met by an

increase in the produce of seeds, the yield being 2,220 maunds or 79 tons.

Thus:—

	Mds.	S.	C.
Kowlaghir Plantation	860	0	0
Paoree Ditto	260	0	0
Ayar Toli Ditto	370	0	0
Hawul Bagh Ditto	480	0	0
Bhintal Ditto	250	0	0

Total Mds. 2,220 0 0

6. Add to this the produce of the Kangra Plantation, Maunds ... } 1,416 0 0

Total Mds. 3,636 0 0

and we have an outturn of 3,636 maunds or 130 tons.

7. This immense produce has enabled me to give great assistance to private Planters throughout the Kohistan of Kumaon, Gurhwal, Deyrah Dhoon, and Punjab, as will be perceived by the appended Table, which shews that the large quantity of 2,513 maunds or 89 tons of seeds have been distributed *gratis* to them.

8. In addition to this large quantity of seeds large numbers of seedling Tea Plants, amounting to two millions four hundred thousand, have been or are being distributed. See Appendix B.

9. But though the amount of seeds and plants at my disposal for distribution is immense, it comes far short of the Indents received, new parties seeking other fields than those of the Kohistan of the North-Western Provinces and Punjab to carry on Tea cultivation. Thus, last season a company established themselves at Hazareebaugh, and to them fifteen maunds of seeds were given. To the Neilgherries, too, considerable quantities of seeds have been sent through Dr. Cleghorn, Superintendent of Forests, and by him I have been informed that Her Majesty's Right Hon'ble Secretary of State for India has sanctioned the engagement of some skilled Native Tea-makers from the Government Factories, North-Western Provinces, in order to assist Tea Planters in the Madras Presidency to prepare Tea.

10. Financially the Tea Plantations may be thus considered:—

To lbs. 41,519 15 0 at Rs. 1-8 per lb. = Rs. 62,279 14 6
2,220 maunds of Seeds " " 20 " md. = " 44,000 0 0

Rupees ... 1,06,279 14 6
To expense of working the Plantations ... Rs. 48,000 0 0

Balance Rs. ... 58,279 14 6

11. To this must be added the value of Tea seedlings distributed, viz., 800,000 seedlings, at Rupees 3 per 100

= Rs. 24,000 0 0

Total Balance ... Rs. 82,279 14 6

12. Of the Teas prepared 16,000 lbs. are being packed for transmission to London for sale in the London market, and the remainder will be sold by auction at Almora and Deyrah Dhoon in compliance with the orders of Government. Some delay in packing the Teas has occurred owing to the limited establishment of Carpenters, which, however, is being remedied.

13. By private Planters the demands for skilled Tea-makers and Native Overseers to superintend their Factories and Plantation operations is great, and to many, such as Messrs. Dick, Berkeley, Troup, Smith, Knyvett, Mohur Sing, Baranath, &c., skilled Native workmen have been given.

14. *Chinese Tea-makers.*—Some of the Chinese Tea-makers whose time of service had expired have left Government employ and entered that of private parties being tempted by a much higher rate of pay, and it has been found necessary to give an increase to the remaining Tea-makers. This, however, has been done without any increase to the Establishment, the increased pay being more than met by that of the men who have resigned.

15. *Apprentices.*—Owing to the small allowance granted to them the number of Apprentices sanctioned by Government has never been quite filled up, and the number now on the Establishment is three, two having left for better paid appointments. Their services have been found highly useful in the Plantations, and could not be dispensed with without detriment to the works going on.

16. *Overseers.*—Owing to the numerous Tea Companies springing up throughout the Kohistan of the North-Western Provinces and Punjab the demand for experienced European Overseers is increasing. The Overseer of the Kowlaghir Plantation, in the Deyrah Dhoon, has been induced, by offer of higher pay, to leave Government employ and enter that of a private Company. The Overseer, too, of Ayar Toli Plantation has also left for a more lucrative appointment.

17. To conduct the duties at Kowlaghir, in the Deyrah Dhoon, I have deputed the Assistant Superintendent of Tea Plantations, Mr. James Thompson, and Mr. T. Mooney conducts the duties at Hawul Bagh and Ayar Toli. By both parties the works are carried on actively and efficiently.

18. The Paoree Plantation has been made over to Mr. J. Henry from the 1st of April, and will form the subject of another communication.

19. To all the Tea Planters throughout the Kohistan and Valleys of the North-Western Provinces I have sent a Circular requesting information as to the quantity of land now brought under cultivation by them, &c., and as soon as I receive replies I shall lay before you, for the information of the Hon'ble the Lieutenant-Governor, a detailed Statement, in order that His Honor may see how the cultivation is spreading.

20. From the Kalee in Kumaon, to the Ravee in Kohistan of the Punjab, the cultivation is being actively and energetically carried on both by European and Native Capitalists, and the day is not far distant when we may expect to see Tea exported from the British Himalays as its staple article of produce, and the Hills made lucrative, instead of, as at present, a drag on the revenues of the country.

21. In a few years the Dehra Dhoon, the most attractive spot in the North-Western Provinces to the European settler, will become a great Tea Garden. In every direction in it Tea Plantations are springing up, and the two things wanted to make them there universal are, in the Eastern Dhoon Drainage and the Western Dhoon, water for drinking purposes and irrigation. The latter might be made available by anicuts being formed near the base of the Himalayas, or at such places where the drainage of the outer Himalayas escapes. It is a fact that at the very time when water is most wanted from the Canals in the Dhoon, viz., in seasons of drought, or even in very dry weather, it can only be obtained in limited quantity, none of the Canals have feeders, and depend entirely on

the supply of the water in the rivers from whence they take their rise. In the Deyrah Dhoon the want of water in a dry season is much felt. In the small Canals the supply of water dwindles down to a few inches. Were a few Reservoirs made, therefore, by forming anicuts at the places mentioned, the supply would always be kept up, even to the great Canals. Anicuts made in the interior of the Himalayas on the courses of the great rivers would be of vast advantage, as by them the full supply of water could always be maintained. That natural anicuts existed on the great rivers, Ganges, Jumna, &c., at a recent geological period must be evident to every one who has followed for any distance the courses of these rivers in the interior of the Himalayas, and in our time, or rather during the last twenty years on the Indus, two natural anicuts have been formed by the descent of glacia into the bed of the river, and which has caused it at Attock to be easily fordable. This, however, only remained for a time, as the basis of the anicuts being of a soluble nature, melted and gave way and allowed the waters to escape, carrying with them vast destruction to life and property. The river swept through and over the Chueh Valley, levelling every village. At Attock, where it contracts, it rose fifty feet above its usual level, and the towns of Hanshealgur and Kalaleagh, though built on the banks high above the usual level, were nearly ruined. The river remained fordable at Attock for three months before the catastrophe occurred, pointing out the feasibility of the undertaking were it desirable. To the Deyrah Dhoon it would be a great boon, and the one thing needful to enable parties to inhabit waterless tracts in both the Western and Eastern Dhoons. There, too, to form his anicuts, the Engineer has every thing that he requires in abundance, of Lime Stone, Sand Stone, and Quartz Rock, to form his dams, and the best Lime available at a cheap rate to form his walls of any strength. There are no engineering difficulties to be experienced as occur on the barren volcanic Rock of Aden. But even there, and in a porous rock like Lava, Reservoirs of vast extent have been made, and in them a supply of water, capable of supplying the town with a population of 30,000 for three years, is kept.

Appendix A.

STATEMENT shewing Tea Seeds distributed from the Government Tea Plantations in Kumaon, Gurkwal, and Deyrah Dhoon during the Season 1861.

Number.	Name of Parties.	Quantity of Seeds distributed.	Total.	REMARKS.
1	Major Ramsay	57 0		
2	Mr. Lyall	57 0		
3	Kundun Lali Shah	10 0		
4	Captain Dansey	40 0		
5	Major McPherson	50 0		
6	Captain Batt	50 0		
7	Colonel E. Money	75 0		
8	General Richards	50 0		
9	Colonel Drummond	15 0		
10	Captain R. G. Mayne	50 0		
11	Telkote Tea Company	75 0		
12	Captain Ellis	40 0		
13	Captain Gwane	20 0		
14	Jai Sah	10 0		
15	Mr. McIver	40 0		
16	Mr. F. A. Warrand	30 0		

Appendix B.

STATEMENT shewing the Tea Seedlings distributed from the Government Tea Plantations in Kumaon, Gurhwal, and Deyrah Dhoon during the Season 1861-62.

Number.	Name of Parties.	Quantity of Seeds distributed.	Total.	REMARKS.
17	General Storey	50 0		
18	R. Rich, Esq.	75 0		
19	Lieutenant C. Troup	75 0		
20	Major Swetenham	15 0		
21	Captain Hutton	15 0		
22	Captain Murray	20 0		
23	Mrs. Dick	40 0		
24	Mr. Dick	40 0		
25	Colonel Knyvett	30 0		
26	Major Raikes	30 0		
27	Assam Tea Company	50 0		
28	Captain Fitzgerald	20 0		
29	Major Rind	30 0		
30	Mr. Forrest	40 0		
31	Colonel Smyth	30 0		
32	West Hopetown Tea Company	45 0		
33	Captain Battinge	25 0		
34	C. B. Blair, Esq.	25 0		
35	Mr. Berkely	50 0		
36	Colonel Campbell	10 0		
37	General Innes	40 0		
38	Mr. W. Grig	20 0		
39	Ramnauth	8 0		
40	Nund Loll	8 0		
41	Kunneyah Loll	8 0		
42	Rajah Lall Sing	8 0		
43	Fawker Doss	5 0		
44	Pretum Doss	5 0		
45	Maharaja of Puttealah	10 0		
			1,496 0	
	Seeds distributed to twenty Europeans from Holta	600 0		
	And 301 Natives	417 0		
			1,017 0	
	Grand Total, Maunds		2,513 0	

Number.	Name of Parties.	Number of Plants.	Total.	REMARKS.
1	Lalla Ramnauth	50,000		
2	Kunyah Loll	30,000		
3	Thakoor Doss	25,000		
4	Bactawur Singh	25,000		
5	Nund Loll	25,000		
6	Mrs. General Dick	25,000		
7	J. McKinnon, Esq.	25,000		
8	Reverend L. Herron	25,000		
9	Colonel Knyvett	35,000		
10	Major McPherson	35,000		
11	R. Rich, Esq.	100,000		
12	Lieutenant Troup	100,000		
13	Colonel Money	100,000		
14	Mr. Meaken	100,000		
15	Captain Ellis	100,000		
			800,000	
	Distributed from the Kangra Plantation to eleven European Planters	1,100,000		
	Ten Native Planters	500,000		
			1,600,000	
	Total		2,400,000	



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, JUNE 28, 1862.

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Government of Bengal.

Vaccination in Bengal in 1861.

From J. McCLELLAND, Esq., M. D., Officiating Principal Inspector-General, Medical Department, to E. H. LUSHINGTON, Esq., Secretary to the Government of Bengal, dated the 9th June 1862.

I HAVE the honor to forward, for submission to His Honor the Lieutenant-Governor of Bengal, the Annual General Return of Vaccination of the Province of Bengal for the year 1861.

General Annual Return of Vaccination in the Presidency of Bengal for the Year 1861.

Fort William, the 1st January 1862.

Divisions.	Stations.	Names of Superintendents.	Number of Vaccinators attached.	Number vaccinated.	Successful Cases.
PRESIDENCY.	Chowringhee Depot	Surgeon Major J. Macpherson, M. D.,	2	1,421	1,171
	Park Street Dispensary	Ditto ditto	1	345	311
	Medical College ditto	T. W. Wilson, M. D.,	1	317	195
	Bhowanipore ditto	Surgeon C. Palmer	1	45	387
	Chittpore ditto	Uncovenanted Surgeon G. R. Naylor	1	251	191
	Gurrunhatta ditto	Ditto J. Hinder		91	85
	Sukeas' Lane ditto	Bt. Surgeon S. B. Partridge		14	13
	North Division ditto	Sub-Assistant Surgeon Nilma-dhub Mookerjee	5	4,177	3,811
	Middle ditto ditto	Ditto Budynath Brumno	5	2,910	2,753
	South ditto ditto	Ditto Jaudob Chunder Ghose	4	4,890	4,314
	Total		20	14,874	13,231

Divisions.	Stations.	Names of Superintendents.	Number of Vaccinators attached.	Number vaccinated.	Successful Cases.
BARRACKPORE.	Akyab	- Assistant Surgeon H. W. Graham	1	1,959	1,266
	Balasore	- Ditto A. Mantell, M. D.,	...	25	...
	Bancoorah	- Ditto R. Fryer	1	177	79
	Baraset	- Sub-Assistant Surgeon Koylas Chunder Chatterjee	1	634	609
	Beerbhoom	- Uncovenanted Surgeon A. J. Sheridan	1	756	318
	Rajshahye	- Assistant Surgeon S. M. Shircore	2	5,144	4,919
	Burdwan	- Ditto H. F. Williams, M. D.,	2	390	346
	Cuttack	- Ditto R. Pringle, M. D.,	1	419	309
	Hooghly	- Bt. Surgeon J. W. R. Amesbury	2	2,002	1,881
	Howrah	- Surgeon C. Palmer, M. D.,	1	997	945
	Jessore	- Assistant Surgeon F. J. Earle, M. D.,	1	526	468
	Kishnaghur	- Ditto J. Elliot, M. D.,	2	434	376
	Maldah	- Honorary Surgeon R. F. Thompson	...	76	64
	Midnapore	- Assistant Surgeon B. Kendall	2	24,127	23,898
	Moorshedabad	- Surgeon Major J. A. Guise	2	1,768	1,696
	Ooterparah	- Bt. Surgeon R. Bird, M. D.,	1	546	526
	Pooree	- Assistant Surgeon J. J. Durant	1	89	19
	Rungpore	- Ditto G. R. Poole	1	858	797
	Rajmehal	- Civil Medical Officer E. J. Roberts	...	...	...
	Darjeeling	- Ditto J. C. Collins	1	260	88
	Dinagapore	- Ditto S. C. Amesbury	...	...	...
	Maunbhoom	- Uncovenanted Surgeon W. J. Ellis	...	...	...
	Malnath	- Native Doctor Gungadhur Banerjee	1	72	72
	Total		24	41,259	38,676
DACCA.	Burisaul or Backergunge	- Assistant Surgeon E. J. Gayer, M. D.,	1	327	146
	Bograh	- Apothecary J. Taylor	1	1,090	1,012
	Bullooah	- Uncovenanted Surgeon H. M. Davis	...	7	...
	Chittagong	- Assistant Surgeon W. B. Beatson, M. D.,	2	636	263
	Cherra	- Ditto T. Dillon, M. D.,	1	230	68
	Dacca	- Surgeon A. Simpson, M. D.,	3	1,106	772
	Debrooghur	- Assistant Surgeon J. B. White	1	202	156
	Furreedpore	- Uncovenanted Medical Officer B. N. Bose, M. D.,	...	137	97
	Gowhatty	- Assistant Surgeon F. W. DeFabeck, M. D.,	1	372	309
	Mymensingh	- Assistant Surgeon R. Banbury	1	369	287
	Nowgong	- Sub-Assistant Surgeon Dumree Tewarry	...	...	...
	Pubna	- Uncovenanted Sub-Assistant Surgeon T. Parker	1	210	161
	Seeksangor	- Native Doctor Foleemoodeen	1	807	474
	Sylhet	- Assistant Surgeon R. Brown	...	34	28
	Tezpore	- Uncovenanted Surgeon J. P. Lynch, M. D.,	1	3	3
	Tipperah	- Assistant Surgeon R. C. Chundra	...	13	9
	Cachar	- Uncovenanted Surgeon C. S. C. Seonce	1	172	133
	Total		15	5,715	3,918

Divisions.	Stations.	Names of Superintendents.	Number of Vaccinators attached.	Number vaccinated.	Successful Cases.
DINAPORE.	Patna	- Surgeon Major J. Sutherland	3	2,265	1,795
	Purneah	- Assistant Surgeon A. G. Crewe	1	237	183
	Gya	- " J. B. Allen	1	19	8
	Bhaugulpore	- " F. B. Farncombe	1	79	14
	Tirhoot	- " N. C. Maenamara	1	1,088	962
	Monghyr	- " T. Duka, M. D.,	2	410	227
	Sarun	- " C. J. Jackson	1	50	42
	Ranchee	- " G. M. Govan, M. D.,	...	167	51
	Champaran	- " J. M. Coates, M. D.,	1	131	100
	Chybassa	- Uncovenanted Surgeon A. F. Meyer, M. D.,	...	...	...
	Arrah	- Assistant Surgeon R. F. Hutchinson, M. D.,	...	51	40
	Hazareebaugh	- Assistant Surgeon W. F. Clark	...	14	1
	Nya Doomka	- Uncovenanted Surgeon W. F. Gass	...	...	...
	Darjeeling	- Assistant Surgeon J. Collins	1	151	48
	Total	..	12	4,662	3,471

JOSEPH EWART, *Assistant Surgeon,*
In charge of the Arrear Branch of the Principal Inspector-
General's Office, Medical Department.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 2, 1862.

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North-Western Provinces.

Report on the Botanical Gardens at Saharunpore.

FROM WILLIAM JAMESON, Esq., Surgeon-Major, Superintendent of the Botanical Gardens, North-Western Provinces, to SIR GEORGE COUPER, BART., and C. B., Secretary to the Government of the North-Western Provinces,—(dated the 26th May 1862.)

IN laying before you, for the information of the Hon'ble the Lieutenant-Governor, a detailed Statement shewing the distribution of Plants and Seeds from the Botanical Gardens, Saharunpore, during the last season, I beg to offer a few brief observations on the manner in which the works have been carried on.

2. From March 1st to 21st November I was absent on Medical Certificate, during which time my duties were actively carried on by Dr. J. L. Stewart.

3. The large number of Plants and parcels of Seeds distributed will, I trust, prove that the Department has been energetically conducted. From Calcutta to Peshawur there is scarcely a Horticultural or Agricultural Institution which has not more or less been benefitted by the receipt of Plants or Seeds. By the Abstract appended it will be perceived that 1,15,437 Fruit Trees, 58,058 Timber Trees and Flowering Shrubs, and 1,616 parcels of Seeds, were, during the season, distributed to applicants.

4. Amongst the chief applicants, we may mention the Superintendents of the Public Gardens at Calcutta, Madras, Neilgherries, Lucknow, Umritsur, Lahore, Jullundur, Deyrah Dhoon, Umballah, Peshawur, &c. The Commanding Officers of Her Majesty's Regiments and Batteries from Benares to Peshawur; Officers in charge of

Districts, Officers in charge of Jails, to all of whom liberal supplies of Seeds, or large number of Plants, have been given. To several of the chief Public Institutions, and many private individuals in Britain, large supplies of Pine and other hardy Timber Seeds have been distributed. To Dr. Forbes Watson, the Examiner of Indian Vegetable Products at Her Majesty's Indian Office, London, large supplies of coniferous Seeds have been given to meet the great demand for them which still prevails in Britain, the Deedar among the number, and one of the handsomest Trees in the Pine Tribe, being still as popular with the Public as when it was first introduced. To many private Establishments, as Messrs. Low, of Clapton, Messrs. Veitch and Co., Exeter, &c., I have also distributed Pine and other hardy Seeds on the understanding that they would reciprocate. A similar arrangement has been made with several Public Institutions. Nor have Native Sirdars and Gentlemen throughout the North-Western Provinces been neglected, as is shewn by upwards of a hundred requisitions from them for large supplies of Seeds and Plants having been complied with.

5. In return for our Seeds the Superintendent of Botanical Garden, Calcutta, has supplied us with three Ward cases filled with Plants desiderated by the Gardens, North-Western Provinces. To His Excellency the Governor of the Ionian Island, at the request of Dr. Hadaway, Her Majesty's Inspector-General of Hospitals, Bombay, a fine collection of Pine Seeds, and for the Italian Minister Count Ricasoli two large parcels of Pine Seeds have, by desire of Her Majesty's Secretary of State, been forwarded. In return for the Seeds, the Governor of the Ionian Islands has forwarded a Wardian case of young Olive Trees (*Olea Europea*.)

6. To meet the immense demand for Seeds for Soldiers' Gardens, a new Garden, sanctioned

by the Hon'ble the Lieutenant-Governor, has been formed at Chejowree, in the Himalays, and by its assistance, Indents to an unlimited extent can now be supplied.

7. In my last Report I stated that many kinds of Seeds when acclimatized in this country degenerated in two or three seasons, in particular those belonging to the umbelliferous and cruciferous families, and in order to keep up the character of the Gardens for distributing good seeds, I brought to the notice of the Hon'ble the Lieutenant-Governor that it would be necessary to import at intervals fresh Seeds from England, the Cape, or America, to renew the Stock. Concurring with this view, the Right Hon'ble the Governor-General in Council moved Her Majesty's Secretary of State for India to order a supply to be sent, and when in England, I was requested to mention the kinds of Seeds most required. I therefore furnished Doctor Forbes Watson with a list, and by him, acting under the orders received from the India Office, three cases of Seeds were forwarded to Calcutta, and which have reached Saharunpore in excellent condition, some of which have been sown, and others forwarded to the Hill Gardens. A Parisian House, Vilmorin Andrieux and Co., have also forwarded an extensive collection of Vegetable and Flower Seeds in exchange for Pine and other hardy Hill Seeds, which have also assisted to stock the Gardens with good Seeds.

8. *En route* to England I visited the Island of Malta. Here I find growing in the most barren, stony, and dry places the Carob Tree, [*Ceratonia Silaqua*] which seeds immensely. By the poorer classes it is ground and mixed with grain, and when baked in the oven it is any thing but disagreeable. In seasons of scarcity it is therefore much used by the poorer inhabitants. It, too, is constantly given to Horses and Mules in the proportion of one measure of Carob Beans to two measures of Barley, and on this food they both work and thrive well. I have therefore brought to India a large quantity of Seed, and have raised a number of Plants in order that its value may be tested in the dry places of the North-Western Provinces. On the Island too, I also found a species of Clover growing every where, and far superior to any green Fodder met with in India. It is there named Sullah, and is a species of *Hedy Sarium*, the *H. Coronarium*. Of it I have also brought a quantity in order to have it tried. In Malta it grows to a height of from four to five feet, and yields an immensely heavy crop, forms green forage for Horses and Mules, and is also dried and used as hay in the winter. When in full flower, in April and May, it presents a very fine appearance.

9. *Flax Seed*.—In my letter to you, No. 65, dated the 1st February, I mentioned the steps taken by me, when in England, to procure Flax Seeds, in compliance with the orders contained in your letter No. 274, dated 14th March 1861. I applied to Mr. H. Field, in St. Petersburg, to procure for me the Seeds from Livonia, and by him a ton and a quarter of fresh Seeds were obtained from Riza, packed in double hempen bags, which were again covered with Buss Mats to protect them from rain, and shipped to London. On arrival there they were, by orders of Her Majesty's Secretary of State for India, sent by the Overland route to Calcutta, from whence they were forwarded by Steamer and Bullock Train to Saharunpore. Before their arrival the season had far advanced. I therefore, fearing that from this cause

the Seed might not germinate freely, only sowed half of the quantity imported. But my caution was unnecessary as every Seed germinated, and I reaped as fine a crop in April as any that I had seen last season in Ireland, proving the value of imported Seeds and the importance of having them sent by the Overland route. By this route, owing to the changing of the packages from the Vessel to the Rail at Alexandria, and from the Rail to the Vessel at Suez, the Seeds are constantly exposed to the air, and thus reach Calcutta in good order. Seed on the other hand sent in Ships by the Cape route, owing, no doubt, to beating when packed in the hold, invariably fail to germinate, as was the case with the fifteen tons of Flax Seed sent by the Indian Flax Company round the Cape to Kurrachee and thence to Sealkote. When I visited by orders of the Punjab Government Sealkote, in March last, I found all these Seeds lying in Godowns and perfectly useless, barring for making oil and cake. To encourage the cultivation in the Punjab and indemnify the Flax Company for the loss sustained, Her Majesty's Secretary of State for India has granted to the Company 10,000 Rupees for two years conditionally, that they raise money to carry on operations for three consecutive years. It is not my intention at present to ask any further support from the Hon'ble the Lieutenant-Governor in the form of European Scutchers from Her Majesty's Regiments, as the crop raised is only one half of the quantity which was proposed to be grown, I shall therefore have the Flax Straw carefully stacked; the Seeds having already been removed, and prepare it as soon as I have a quantity in hand to justify me to make application to Government for aid in preparing. All the Seed therefore of the present crop will be preserved for my own purposes, and in the ensuing season I shall be prepared to issue to private parties Seeds in quantity. The Rowan Flax Scutching Machine, too, has not yet reached Saharunpore, and may be expected in the course of the month, which will assist greatly the operations in preparing the Flax. To Mr. Macleod, Financial Commissioner of the Punjab, I forwarded a small sample of the Flax grown this season, in order that it might be examined by Mr. Wightman, which was done, and pronounced by him to be very fine Flax Straw, and admirably fitted for making fibre for the Home Market. To make, however, any speculations would be premature at present. I may however state that the importation of Seed could not have been more successful. In the Punjab, His Honor the Lieutenant-Governor has sanctioned an expenditure of Rupees 500 for prizes to be distributed by the District Authorities for the best Flax Fibre Straw produced by Native Cultivators. As soon as acclimated Seeds can be distributed to Natives of the North-Western Provinces, I shall respectfully solicit the Hon'ble the Lieutenant-Governor to countenance in a similar manner the cultivation in his kingdom.

10. But Flax is not the only fibre which deserves the attention of Government. There are many others. Nowhere, however, is there a collection of the Raw Products of the North-Western Provinces to be met, and it is only on pressing and extraordinary occasions, such as a European War causing a dearth to the British looms, that attention is paid to the fibres and fibrous stuffs of India. Attached to all the great Public Botanical Collections in Europe, there is now an Economic Museum in which are

exhibited all the raw materials belonging to the Vegetable Kingdom in the form of different kinds of Woods, Fibres, Seeds, Fruit, Oils, Gums, Resins, Singars, Food yielding substances, Medicinal substances, Dyes, or in other words a collection not only interesting, but practically useful to parties of all professions. In India no where does such a collection exist, and no where could a complete one more easily be brought together, provided that it is countenanced by Government, as in the agency at their command, there is a band of Officers who, for intelligence and efficiency, are not to be surpassed in any country, and who would gladly assist in bringing together the products of their Districts. Were samples of these products all contained under one roof, not only would parties be able to compare the products of different Districts with one another, but also they would be able to bring to light such as would be useful in the Arts, and fitted for the looms of the mother country. For locating such a collection, the Saharunpore Garden is admirably fitted, as from the Officer in charge it would always receive the attention that it deserves, and he would always have an opportunity of bringing to the notice of the Public valuable materials. To the Home Manufacturer, the Sunns, Patuns, Sunnees, which every where abound, and which are so admirably fitted for the British looms, particularly those of Dundee and Buchin, &c., at present are unknown. To the British Manufacturer, our Boehmia, Bunhinea, Daphne, Glereulia, Marsdenia, Aloe Fibers are also unknown. The same was the case with Bengal Jute a few years ago, but which now forms a trade of tens of thousands of tons, giving employment to thousands of individuals. To bring together such a collection a proper building for its accommodation alone is wanting, as every Officer would willingly and readily collect the products of his District when made cognizant of the object Government had in view. To erect such a building there is an excellent vacant space in the Garden available for the purpose, all therefore that are wanting are Funds.

11. For such a collection a pucca building with flat roof would be necessary, and one might be erected at an expense of from Rupees 4,000 to Rupees 5,000. This small sum would soon be returned to the country a hundred fold by the publicity that it would give to its raw products. I would therefore respectfully solicit the countenance of the Hon'ble the Lieutenant-Governor to such an undertaking.

12. But it might be urged that the Natives would treat such a collection with indifference. Twenty years ago such remarks were made regarding the working classes in Britain, and such collections were unknown. Now every second-rate town has its Economic Museum, and the great collection in the Botanical Gardens at Kew, distant some thirty miles from London, is the Caille princeps of Museums of Industry, and daily frequented by thousands in search of information and recreation.

13. Let such collections be formed in this country, and they would tend to interest the mind of the Native in its products, and give those anxious and willing to turn the raw products to good account an opportunity of examining them. Ignorant and apathetic Natives are, but still they are ever open, at least the better informed classes, to the advancement of their own interests. By

forming an Industrial Museum Government would give an opportunity to parties to point out the products that would meet with a ready sale in the Home Markets, and would stir up a spirit of enquiry at present latent, and which only requires ocular demonstration and example to be developed.

14. As connected with these Gardens, I may briefly mention the Government Tea Plantations, which have formed the subject of another communication. From them there have been distributed to Tea Companies and Private Planters, during the season, the immense quantity of eighty-nine tons of Seeds, and two millions three hundred thousand Seedling Tea Plants, thus scattering this important Plant broadcast over the Kohistan of the North-Western Provinces and Punjab.

15. For the Medical Department of the Public Service large supplies of extract and dried leaves of Hyoscyamus have been prepared, viz., lbs. 244.13 of the former, and 64 lbs. of the latter. The following Medical substances have also been forwarded to the Chief Medical Store-keeper and Medical Depot-keepers, in compliance with requisitions from the Secretary to the Chief Inspector-General of Hospitals:—

Tubers of Atees [Aconitum	
Licterophyllum]	lbs. 460
The powder of Kaimaillee [Rottlera	
Tinctoria]	420
Roots of the Berberry—Berberies	130

16. *Conservatory*.—The Glass sanctioned by the Hon'ble the Lieutenant-Governor for the roof of the Conservatory was procured by me in London, and is daily expected at Saharunpore, when it arrives the building will, as soon possible, be repaired.

17. To the Gardens many acquisitions have been made, for which I am indebted to Dr. Anderson, Officiating Superintendent, Botanical Gardens, Calcutta; Dr. Forbes Watson, Inspector of Indian Vegetable Products, London; Dr. Clegburn, Superintendent of Forests, Madras; and Captain Pearson, Superintendent of Forests, Central India.

18. In conclusion, I beg to state that the Head Gardener, Mr. W. Bell, selected by Professor Balfour, of Edinburgh, for the Saharunpore Gardens, has joined, and through his aid I trust to add to their efficiency and usefulness.

ABSTRACT Statement showing the distributions of Plants, Seeds, &c., from Her Majesty's Government Botanical Garden, Saharunpore, during the year 1861.

	Fruit Trees.	Timber, Shrub, and Flower Plants.	Parcel of Seeds.
January	28,011	1,201	35
February	3,218	2,349	170
March	1,268	2,476	110
April	160	1,446	78
May	102	137	80
June	743	625	273
July	1,174	442	254
August	5,273	2,551	168
September	348	1,791	158
October	9,706	1,243	110
November	8,972	852	36
December	56,462	42,945	146
Total	1,15,437	58,058	1,618

From SIR GEORGE COOPER, BART., and C. B., Secretary to the Government of the North-Western Provinces, to W. JAMESON, Esq., Surgeon-Major, Superintendent, Botanical Gardens, North-Western Provinces,—(dated the 20th June 1862.)

I AM directed to acknowledge the receipt of your letter No. 318, dated the 26th of May, being a Report on the working of the Botanical Gardens at Saharunpore during the year 1861, and to communicate the following remarks in reply.

2. It is satisfactorily shewn that the Garden continues to fulfil one of its principal purposes with efficiency in the extensive distribution of Fruit Trees, Timber Trees, and Seeds of all kinds, not only throughout the North-Western Provinces but throughout India, and even in European Countries.

3. The duties of the Department have been conducted with much zeal and energy, and the acknowledgments of the Government are due to your *locum tenens* Dr. J. L. Stewart, as well as to yourself, for bearing in mind the interests of the Garden, even during your temporary absence from India.

4. The reciprocity exhibited by those who have been furnished with Plants and Seeds from the Garden is gratifying.

5. It appears very probable that the produce of the Carob Tree, and the particular species of Clover grown in Malta, if they should be successfully raised in India, may become exceedingly valuable as fodder for cattle; and every endeavor should be made to acclimatize and propagate both. Perhaps the Officers attached to the Stud at Saharunpore may be induced to co-operate with you in your experiments.

6. The Lieutenant-Governor congratulates you on the success which has attended the importation, by the overland route, of Russian Flax Seed, and on the excellent crop which it has produced. The Government will readily aid you in your

further operations, and will be prepared at the fitting time to sanction the distribution of prizes for the best specimens of Flax Straw produced by Native Cultivators.

7. The Lieutenant-Governor fully appreciates the importance of bringing prominently to notice the many valuable fibrous plants that are indigenous to India, and he believes that there is no measure better calculated to accomplish this end than the establishment of an Economic Museum in which the raw materials belonging to the Vegetable Kingdom should be collected and be held open to the inspection of all comers. There can be no doubt that the several Officers of the Government will readily aid in procuring and sending to the Museum specimens of the various articles which you have enumerated, and the collection will be very valuable in view of the publicity which would thereby be given to the existence of many raw products now unknown beyond the site of their growth.

8. The Saharunpore Garden will afford the most suitable locality for such a Museum, and the Lieutenant-Governor will be glad to consider the means of providing a suitable building, which is of course indispensable. With this view, an Extract (paragraphs 10-13) from your Report and (paragraphs 7-8) from this reply will be sent to the Department Public Works.

9. The progress of the Government Tea Plantation and the large aid given by them in the propagation of the Tea Plant by the distribution of Seeds and Seedlings have been noticed in my reply to your separate Report on the subject.

10. Copies of your interesting Report, and its enclosure, and of this reply, will be forwarded to the Government of India, with a request that they may be published in a *Supplement to the Calcutta Gazette* for general information.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 9, 1862.

OFFICIAL PAPERS.

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Home Department.

Alleged discovery of a vein of Galena in Sownlore Creek, Tenasserim Provinces.

The alleged discovery abovementioned having been brought to the notice of the Government, the Commissioner of the Tenasserim Provinces was called upon for a report, and the following correspondence on the subject is published for general information:—

From LIEUTENANT-COLONEL A. P. PHAYRE, Chief Commissioner of British Burmah, and Agent to the Governor-General, to E. C. BAYLEY, Esq., Secretary to the Government of India, Home Department,—(No. 990, dated Rangoon, the 20th May 1862.)

SIR,—WITH reference to letter No. 1842, dated 13th September last, from Mr. Secretary W. Grey, to the address of the Commissioner of Tenasserim and Martaban Provinces, I have the honor to submit copies of the letters as noted in

the margin from the Deputy Commissioners of the Districts of Mergui and Tavoy, reporting their efforts to reach a spot on a stream running into the Tenasserim River, where it was believed

there existed a vein of Galena. A Sketch Map constructed by Captain Harrison, Deputy Commissioner of Mergui, accompanies the report.

2. It will be seen from the report of Major Stevenson that he failed to reach the spot where the lode of Galena exists, but it appears to be situated on a stream called the Tsoung or Tsoung Wah, (Sownlore Creek of the original correspondence), which runs into the Tenasserim River within the Tavoy District. Major Stevenson was rather late in the season and had not with him the means

for prosecuting a journey through so difficult a country. He will however be instructed to proceed there next dry season.

3. After Major Stevenson's return to the Station of Tavoy, a Karen brought to him some specimens of the ore from the same place, which are forwarded in a separate package.

4. Since then, Colonel Fytche informs me that a further quantity of the ore has been brought in, and has been forwarded by Major Stevenson to Professor Oldham, Superintendent of the Geological Museum.

From MAJOR J. F. J. STEVENSON, Deputy Commissioner, 3rd Class, Tavoy, Tenasserim and Martaban Provinces, to LIEUTENANT-COLONEL ALBERT FYTCHE, Commissioner of Tenasserim Division, Moulmein,—(dated Tavoy, the 15th March 1862.)

SIR,—I HAVE the honor to inform you that I have just returned from an unsuccessful attempt to reach the site of the ore of Galena on the Tenasserim River.

2. Captain Harrison, Deputy Commissioner of Mergui, passed through Tavoy, under orders from you to visit the said site last month. As it was supposed that it was in his District, I informed him that I believed that it was above a certain Karen Village (Aungthawara) on the Tenasserim River, which is in the Tavoy District. He was not convinced, and I proposed to make the journey with him. We went first from Tavoy to Metta, the largest Karen Village in this District, situated on what are called the forks of the Tenasserim, about thirty-four miles from Tavoy. Thence we started in canoes on the 28th February, and on the 3rd March reached Thewa stream on the right bank of the Tenasserim about seventy miles below Metta; we had ascertained that the stone containing the ore was in the Jawngwa, the mouth, or rather mouths of which are about eleven or twelve miles above Thewa. But it is impossible

to get up the bed of the Saungwa stream, nor is there any other way of getting to the site of the stone than by a path (called *too-lau* from Thewa). Captain Harrison now finding that Thewa, or, as it is erroneously called in Mergui, *Kewa* was in my District, saw no reason for carrying on his investigations any further, so we parted here, he going on down the Tenasserim, and I going by land across the country towards the Saungwa, intending to cross over to the Upper Tenasserim, (Bing Khyoung) a journey of about seventy or seventy-five miles. In the first place, I was unfortunate in finding no guide who could shew me the stone. I had no time to make any preparations before leaving Tavoy for obtaining Guides and Elephants, and clearing the path, as Captain Harrison was pressed for time, and I thought it my duty not to let him go alone, as I believed the stone to be in Tavoy. My Karen, Myook, who knew where the stone was, accompanied us to Thewa, and was to have gone on with me, but he fell ill, and I was obliged to send him back up the Tenasserim. I succeeded in getting one Elephant and half-a-dozen men, and Mr. John Davies, Inspector of Police, and I started on the morning of the 4th March for the Saungwa. After struggling on nearly all day, I found that the undertaking was too arduous for this season of the year in the present state of the path and the jungle. The heat was most oppressive and the ground very difficult. The Elephant came along very well at first, but as we went on it seemed impossible that he could follow us, and the Karens thought that he could not,—only one Elephant, I believe, had ever been taken over previously, and not at this season of the year. Without the Elephant I could not have gone on, as he not only carried me occasionally, but the greater part of our kit.

3. As far as I could make out, the Saungwa is about twenty-five miles from Thewa. I returned therefore to the Thewa. On our way back a herd of Bison charged our Karen Coolies, who saved themselves by springing up some tall bamboos. The previous evening Mr. Davis encountered one not far from our hut, we got back to Metta by boats in four days. It was very hard work indeed coming up the stream, which is very shallow in some places at this season, and full of rapids. I regret to say that there is hardly any population along the river, only fifteen or sixteen houses on the banks between Metta and Thewa, and none in the interior behind the banks. Captain Harrison is making route survey of the whole course of the river. It runs through a very hilly country, but there are no fine mountains; the jungle is most dense; Elephants, Rhinoceros, Bison, and Buffaloes appear to be numerous.

4. A day or two after my return to Tavoy a Karen brought me some of the stone which he said was the same as that in which the Galena were first found, and I have the honor to forward it. He had heard of the enquiries about the ore this year, and had gone on an independent journey of his own to get it. He went across the country from the Tavoy, not the Tenasserim side, even a worse journey than the other. It appears that he was one of those who first took it to Mergui about 1855. I had almost forgotten to mention that we found some very hot Springs (sulphurated, not saline apparently,) about six miles from the Thewa, a boiling point thermometer which I had

with me was not affected by it, and another marking up to 157° did not register high enough to shew the temperature.

From CAPTAIN W. P. HARRISON, Deputy Commissioner, 4th Class, Mergui, to COLONEL A. FYTCHE, Commissioner of Tenasserim Division, Moulmain,—(dated Mergui, the 24th March 1862.)

SIR,—I BEG to express my regret that I have hitherto been unable to reply to your letter No. 88, dated 8th October 1861, regarding the supposed discovery of a vein of Galena in this Province. Sickness, which necessitated my absence from the Province for a month, and then the introduction of the new system of Police, prevented the possibility of my doing this before. I had however, in the meanwhile, taken care to make every enquiry here to find out the source of Assistant Surgeon Evezard's information, and discovered that the intelligent Karen to whom he refers was dead. I was told many fabulous stories of a place called the Htsoung Wah Creek, which have every reason to believe is the place called by Mr. Evezard the Sowulore Creek, and found that my nearest way to reach the place was by Palaw and Pulauk, and then crossing the country to the banks of the Tenasserim River to a place called Yay-wah or Thay-wah.

2. I have now the honor to report that I left Mergui on the 27th of January last, and proceeded by boat to Pulawh, thence I crossed on foot by jungle paths leading over a hilly country to the banks of the Tenasserim River. As so very little is known of this part, I made a rough route survey of my journey, and I hope to be able to prepare a Sketch to accompany this letter.

3. I descended the Tenasserim River for three days in rafts, the general course of the river being here from south to north to a place called Kyouktong. The river here is confined by hills and rapids, and falls are numerous, so that though I was nine hours actually *en route* every day, I did not accomplish more than twenty miles on an average.

4. From Kyouktong it was my intention to have crossed the great head which the Tenasserim River takes to the east to Thay-wah, but from the information I received, I found that I could not then reach Mergui in time to receive you on your tour of Circuit, and I was reluctantly obliged to abandon the attempt of any further search and return to Mergui. My shortest road then was by Tavoy. At Kyouktong, therefore, I procured a few canoes, and descending the river again for about thirty miles I came to Phaunday, thence two days' walk of twenty-seven and nineteen miles brought me to Tavoy.

5. At Tavoy I most unexpectedly met you, and as I found that you were prevented from visiting Mergui again at that time, and that you would not be here for another month, I determined on continuing my search, and started in company with Major Stevenson for Yay-wah *via* Metta Myo.

6. The road to Metta Myo being well known and lying wholly in the Tavoy Province needs no description by me. At Metta we procured boats, and descending the river for five days halted at a place not far from the mouth of the Yay-wah Creek. The portages were numerous, and in many places very difficult from the large rocks which

form the bed of the stream, amidst and over which the stream boiled and bubbled with the greatest impetuosity.

7. This place close to which a road crosses over the hills into Siam, I calculated by my route survey to be only four miles south of Tavoy, and there was no doubt then that we were in the neighbourhood of the place whence the Galena had been obtained. As this was clearly in the Tavoy Province, and as Major Stevenson was on the spot and acquainted with the necessity of a report being sent to you on the discovery of this vein of Galena, and as I found that I had probably only just sufficient time left in which to reach Mergui before your expected arrival here on the 20th instant, I left Major Stevenson to prosecute his enquiries on the spot and continued my descent of the Tenasserim River.

8. Eight days hard work of eight and nine hours a day brought me to Tenasserim, so that I fear the inaccessibility of the place where the Galena is said to have been found will prevent its being worked to profit and advantage.

9. The Sketch which accompanies this letter may I think be relied on, for when I came to plot my work I found that in the whole distance of more than 400 miles there was only a trifling error of three or four miles, but as the only instruments

I could use from the way in which I was travelling were a Compass and Watch, and distance were all estimated by time, it cannot be called a Survey.

10. The exact position of the vein of Galena will probably be reported to you by Major Stevenson, and I have no doubt myself that the place whence Mr. Eveyard procured the specimen he sent to the Medical Board is in the hills which form the watershed between the Tenasserim River Proper and that portion of it which is called the Bin Khyoung, and amongst which hills the streams named Trong-wah, Thay-wah, and Kayonktong take their rise.

11. The Tenasserim River from the town of that name to Mergui is taken from Surveys by Mr. Montgomerie and others. The coast line is taken from the published Chart of Captain Ross.

FROM DR. F. N. MACNAMARA, Chemical Examiner to Government, to E. C. BAYLEY, Esq., Secretary to the Government of India, Home Department,—(No. 105, dated 2nd July 1862.)

SIR,—WITH reference to your letter No. 3069, I have the honor to report that the mineral therewith sent contains no Galena or other ore of lead. The lustrous black constituent of the mineral is black mica.



SUPPLEMENT TO The Calcutta Gazette.

SATURDAY, JULY 19, 1862.

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Government of Bengal.

Vernacular Education in Bengal.

From W. S. SETON-KARR, Esq., Officiating Secretary to the Government of Bengal, to W. GREY, Esq., Secretary to the Government of India, Home Department, dated the 19th October 1860.

I AM directed, with reference to your several letters noted in the margin, to forward the views of the Lieutenant-Governor on the subject of providing cheap Schools for the masses, and of improving and extending Vernacular Education generally.

2. The Lieutenant-Governor has referred to Lord Stanley's Despatch on the subject of Education generally, which was received after the first of your letters under acknowledgment had been forwarded, and in which various important points connected with Education are discussed; but the present communication will be confined to an exposition of his views regarding Vernacular Education for the lower classes, and to the question of the Funds from which such Education must be supplied. The Lieutenant-Governor, in pursuance of the instructions contained in your letter of the 17th of May 1859, has consulted, on this important subject, not only the Officials of the Educational Department, but several other Gentlemen, Europeans and Natives, who have either had practical experience in dealing with Village Schools, or have always shewn an interest in the elevation and well-being of the Ryots. The information

given by the above Gentlemen, whose names

W. S. Seton-Karr, Esquire.
Dr. F. J. Mouat.
G. Smith, Esquire.
N. P. Pogoose, Esquire.
R. Hand, Esquire.
Rev. W. Kay.
" J. Long.
" T. Sandys.
" J. Ogilvie.
" B. Geldt.
" K. M. Banerjee.
Rajah Radakant Deb Bahadoor.
" Prasunno Nath Roy Bahadoor.
" Suttichurn Ghosal.
" Suttichunder Roy.
Rai Prasunno Narain Deb.
Baboo Issurechunder Surma.
" Romnanath Tagore.
" Prasunno Coomarr Ghose.
" Peary Chand Mittra.
" Samachurn Sircar.
" Debendranath Tagore.
" Issurechunder Ghosal.
" Shibchunder Deb.
Moonshee Ameer Ally.

are entered in the margin, is herewith forwarded, and aided by their opinions, as well as by a consideration of the means hitherto employed for this object, the Lieutenant-Governor is now enabled to explain the plan which he recommends for the attainment of the object in view.

3. The Lieutenant-Governor clearly understands the intention of the Government of India, and of the Home Government, to be, that Grants-in-aid are not to be applied to the extension or support of purely indigenous Vernacular Schools, but are to be reserved for English Schools, for Anglo-Vernacular Schools, and for Vernacular Schools of a comparatively high order. The present object then is to devise some scheme for the instruction of the lower agricultural classes which may be tried at once experimentally, but shall be capable of easy extension; and be not ill adapted to any existing system; suitable to the wants of the people; not calculated to offend their prejudices; and, above all, which shall not be attended with inordinate expense, not only at first, but when developed to its fullest extent.

4. Bearing this in mind, the Lieutenant-Governor has come to the conclusion that our best chance of success lies in basing a new scheme on the indigenous Schools already existing throughout the Districts of Bengal, and, indeed,

to be found, more or less, in every part of India. He has fully considered everything that can be said, and that has been said, to the disparagement of these primitive Institutions. The poor appearance of the Sheds used as School-houses; the ignorance, obstinacy, and prejudice of the Gurus who preside over them; the almost total want of School Books; the very humble character of the instruction generally imparted, and the poverty of the Scholars have not been overlooked. But if we are to convey instruction of any kind to the lower orders we must not, the Lieutenant-Governor thinks, affect to disregard the kind of instruction that the people have hitherto sought and approved. All attempts made to reach the mere Agriculturist, however praiseworthy, and by whatever amount of talent and energy supported, must fail wherever they are not in unison with the habits and feelings of the people. The kind of instruction which the people naturally desire must not be forgotten. The aid of the Village School Masters must be invoked. The possibility of elevating and improving both the Schools, and the race of School Masters, should not be hastily disregarded. Any scheme involving the abolition of all existing Village Schools, and the deprivation of all the School Masters, must create for itself obstacles that may be insurmountable.

5. The ground-work of the plan which the Lieutenant-Governor contemplates must, therefore, be the present indigenous Schools. That they exist in numbers, in Lower Bengal especially, is unquestionable. Mr. Long estimates that in Bengal alone there are 30,000 Village Gurus, and indeed all persons who have been consulted, at any time when the question of Vernacular Education has been under consideration, from the time of Mr. Adam downwards, however they might differ as to the possibility of improvement, have had no doubt as to their existence, or as to their numbers. The Lieutenant-Governor, then, approving only of a scheme which shall openly recognize the existence and utility of these Institutions, would set about this recognition in the following manner.

6. Lists of every Village School in each Zillah that may be included in the scene of operations should be prepared by the Education Department in communication with the District Officers. The Inspector, aided by Deputy Inspectors, should then proceed to make his selection of those Schools which he may think most important and most capable of improvement. In doing this he would naturally be guided partly by personal, and partly by local considerations. In this selection much will depend on the judgment and tact of the Inspecting Officer.

7. When the requisite number of Schools shall have been selected, the Inspector must endeavor to induce the Gurus, or the Proprietors and Supporters of the Schools, who are often Talookdars and middlemen, to submit to periodical inspection. To this end the Lieutenant-Governor would not propose that any pledge should be demanded, from either School Masters or Proprietors, as to the repairs of the School-house, or the number of Scholars; or that any weekly or monthly Returns or Statements of any kind should be forwarded to the Inspectors. This Officer, before admitting the School on his List, must take care to satisfy himself that there is a School-house in existence, and that it has a fair daily attendance of Scholars; also that the Master is willing to receive the support

of Government. The erection and repairs of the School-house being left to the inhabitants, the Teacher would be chiefly remunerated, as he is now, by the fees of the Scholars. In this way the cost of the institution of the School, and the greater part of the expense of its maintenance, being still defrayed by the people of the neighbourhood, the scheme, even when fully developed, need not be impracticable from its costliness. But, in order to enlist the sympathies of the Teacher, and to overcome his prejudices, as well as to raise the character of the Institution, the following means are suggested:—Books should be supplied to the Schools at a very low price. These Books should contain, in a compact form, all that has hitherto been taught at such places by Dictation, namely, Arithmetic, Agricultural and Commercial Accounts, Forms of Agreements, Quittances of Rents, Bonds, &c., and even models of the complimentary or formal letters which inferiors constantly address to their superiors. The Lieutenant-Governor does not feel warranted in despising this last kind of instruction, because it is not conveyed to the son of an English Peasant. It is sufficient for our purposes that such instruction has been imparted in India for generations. The above course will enable any lad of ordinary intelligence to read and write correctly, and to see that he is not cheated in his Accounts by the Mahajun or the Agent of the Zemindar. A Book of this kind has been in use in some Schools near Calcutta; and, as being in every way suited for the purpose, should be largely supplied to other similar Schools.

8. On this rude and primitive foundation the Lieutenant-Governor would build a structure of a better kind, taking great care, however, that the higher and better instruction offered should not be too much in advance of the requirements of the people. He would rigidly exclude all attempts at English Instruction; or at imparting to Bengal Village Boys information which can in their case serve no purpose but to puzzle their heads with strange names and foreign ideas. He would restrict the improved course to the measurement of land; to some short Bengali Grammar of the simplest kind; and to the very first Elements of Geography, and of Indian History. If the sons of Ryots, in addition to the present course of Village instruction, can be induced to read Books of instruction and amusement (which must be for the most part written for the purpose); to write with neatness on leaves or paper; to measure their own lands correctly; and to know a little about the existence of other Countries and the history and condition of their own, with the prospect of a better Education for their sons, a great step will have been made.

9. When the selection of certain Schools has been made, and when it has been formally announced that the course of instruction shall not be hastily changed, and shall be supplied with the mechanical aids of which it has hitherto been destitute, it will still be necessary to secure the co-operation of the Guru. But, to this end, the Lieutenant-Governor thinks that any compulsory examination, which some Gentlemen have recommended to be forced on such persons, would defeat the object which we have in view. It is useless to expect that the ordinary race of Village Teachers would submit to any ordeal of the kind. All that can be done is, by conference, by judicious advance, and by holding out hopes of reward to stimulate the best men of the class to greater

exertion, and to lead them to adopt an improved course of study. This, it must be conceded, is the one difficulty of the scheme. But it does not seem an insurmountable difficulty. When a certain number of Gurus shall have been induced to adopt the improved system, the feeling of the people will be so much in favor of it as to force it upon the remainder, or to drive them out of employment.

10. It is here, of course, that the substantial aid of Government must come in, and there can be no inducement so powerful as a payment of a reward in cash. The Lieutenant-Governor would take care that these rewards should be quite distinct from any system of Grants-in-aid. They would be distributed within a fixed limit by the Inspector on his being satisfied that the School had been well attended by Scholars, who had passed a fair examination in the subjects to which it is proposed in this letter to limit the Education of the Ryot. In this way the minute Returns, the lengthy Statements, and the constant supervision necessary in the system of Grants-in-aid, and noticed as prejudicial by Dr. Mouat in his letter of the 20th of August 1859, would be quite unnecessary; while, on the other hand, care must be taken that rewards are not given for mere musters of Boys collected together to make a good shew. Visits should take place only as often as is necessary for a fair knowledge of what is going on. We know that, when the inhabitants want a School, they will maintain one; if the son of an Agriculturist wishes to learn anything at all, he will attend such a School; and if the Guru is capable of teaching anything at all, he will find Scholars. It is to the improvement of such Schools, when brought into existence by the voluntary act of the inhabitants, that the State must look. The reward given to the Guru need in no case exceed half the fees which he receives from his Scholars, or say a sum of Rupees 30 or Rupees 36 a year; and often it need not amount to so much. Taking the average of a Teacher's earnings at 5 Rupees a month, the sum spent in rewards to each School Master would not on an average exceed 30 Rupees a year, and the Lieutenant-Governor believes that the prospect of such a sum would stimulate all but the most apathetic and bigotted Teachers. If any Guru proves impervious to advice, encouragement, or the hope of reward, or having promised largely fails to fulfil his promises, he will at once be struck off the Government Lists. But if, by advice, conciliatory treatment, Books and substantial rewards, even a dozen Schools were led to adopt a better and higher kind of instruction in any one Zillah, the latent energies of neighbouring School Masters would in time be excited, and if a scheme so based should once gain a secured footing, there might eventually, the Lieutenant-Governor thinks, be no limit to the extension of Vernacular Education, except the wants of the people.

11. The Lieutenant-Governor has no objection to see a few Vernacular Schools established by Government to serve as models to the indigenous Schools. He thinks that about half a dozen of these should be established in each District on the scale to be explained hereafter; but he would avoid the error of establishing them at the Sudder Stations, or even necessarily at the Stations of Sub-Divisions. These places

have been sometimes selected under the idea that supervision could there be most readily exercised. This is true; but the tendency of the Native servants of Government, whose sons mostly frequent Schools at such places, is to wish for English Education, and Vernacular Schools so situated might not attract the class of Scholars for whose benefit the present scheme is intended. The places selected for the Model Schools to be established by Government should be, not Bazzars, but thickly populated rural Villages, inhabited partly by Artizans, but mainly by Agriculturists of rather the better class. The things taught in the Government Institutions should be absolutely identical with those taught in the indigenous Institution. The house will be better built, and the Teachers better educated and better paid, and Books and writing materials will from the first take the place of Dictation and scribbling on sand. Of course such Schools cannot be established at the cost of 50 Rupees a year, which sum, by the plan now under discussion, it is proposed shall be the limit of expense for all purposes in each purely Village School. The Government would have to build the School-house and to keep it in repair, and the salary of the Head Teacher, who might be available for the occasional inspection and examination of other Schools, could not be fixed at less than 20 Rupees a month: this sum to be paid exclusive of the fees which should be demanded from the Scholars at the monthly rate of one anna or two annas a head. Books must be supplied at a very trifling cost as to the other Schools previously in existence.

12. The arrangements being approved for the supervision of the indigenous, and for the establishment of Government Schools to serve as models, there remains for consideration the staff by which the Schools are to be selected, supervised, and, in some degree, controlled. For this it would be necessary to have a staff of Deputy Inspectors. But as repeated visits and constant supervision by such Inspectors do not form a part of the present proposal, it would be possible, the Lieutenant-Governor thinks, to have the work performed by a moderate number of such Officers. Taking the scale of indigenous Schools to be visited, at 100 per Zillah at first, and each School to require visits not much more than once a quarter, there would be 400 visits to be performed annually. To do justice to this number not less than four Deputy Inspectors would be required, who would each have twenty-five Schools to look after in his own Circle. The Deputy Inspectors might reside near the Model Schools, and bestow a close attention to their improvement at such times as they were not going the round of the Villages. Institutions wholly supported by Government obviously demand, and can endure, a more strict superintendence than independent Institutions presided over by Gurus self-elected, or chosen and paid by the Talookdars and Ryots; and one main object of the plan which the Lieutenant-Governor is now proposing is, that the retention of the indigenous Schools on the Government List should depend not on minute control, but on the results shewn at each Examination.

13. The expense of this scheme would be as follows:—The Lieutenant-Governor will take the number of 100 Schools, with six Model Schools, and their necessary staff, as one suitable for an

experiment, and capable of being enlarged by doubling, or trebling, or quadrupling the scale of the whole expenditure; thus 100 indigenous Schools in each District, costing Rupees 50 a year in all, would amount to Rupees 5,000 a year. The Model Schools could not be supported at a less cost than Rupees 30 a month, including the salary of the Head Teacher fixed at Rupees 20, or Rupees 360 a year. The salaries of the Deputy Inspectors must be liberal to secure the salaries of men of independence, honesty, and energy; and the Lieutenant-Governor does not think that qualified persons could be secured for less than 100 Rupees a month, including travelling allowances. Thus the whole expense for one District would be as follows:—

	Month.	Year.
100 Indigenous Schools ...	0	5,000
Six Model Schools, each at Rs. 30 a month ...	180	2,160
Four Sub-Inspectors, at Rs. 100 a month each ...	400	4,800
		11,960

Total in round numbers, Rupees 12,000

14. It is by no means the intention of the Lieutenant-Governor to recommend that the support of the State should be limited to one hundred Schools in a District, with half a dozen Model Schools, and a corresponding staff of Inspecting Officers. The above is taken as a fair proportion to start with on a reasonable scale of expenditure worthy of being tested, and should the plan succeed it will be a mere question of money whether the numbers, as before stated, should not be doubled, trebled, quadrupled, or still more largely multiplied. If the time should ever

* NOTE.—The number of Villages in a large District is about 5,000; this would give one School to every five Villages.

Schools to a District aided by Government, and affording the Agriculturists a simple and practical Education, commensurate with their wants, the State, in such a case, might be held to have fairly done its duty by a neglected portion of its subjects.

15. The above plan has already been tried in some of the Districts of Bengal to a very limited extent, and it is now under trial in Assam.

16. Another plan of dealing with indigenous Schools has been tried by Mr. Woodrow, the Inspector for East Bengal. Its basis of operations is partly the same as that of the plan above recommended. The Village Schools, with their primitive instruction, are taken as they are found. The difference is in the treatment of the Schools and of the Masters.

17. Mr. Woodrow selects three Village Schools within a Circle of two or three miles of each other. To these three Schools one Pandit is attached by Government, who receives a salary of 15 Rupees a month, and who visits each of the three Schools once a week, spending two days at each School. It is the business of the Pandit to prevail on the Village Guru to adopt an improved course of instruction, and to shew him practically the details of this course. For this end money is freely spent in rewards to such Gurus as consent to enter on a new system, and these rewards are of course exclusive of the salaries of the Pandits. It often happens that of

the three Schools one assumes a marked superiority over the other two, and when this result takes place, and the inhabitants exhibit an anxiety for a permanent Teacher to supplant the Guru, the Pandit is then appointed to be their Teacher on a salary not of 15 but of 10 Rupees, the difference being made up to him by the fees of the Scholars, and the School thus becomes in every respect a Vernacular School wholly maintained by Government. This experiment, as tried by Mr. Woodrow, already embraces in round numbers 200 Schools in an aggregate of three or four Districts. The cost of each of the three Schools, to which the Pandit's salary is chargeable, has been *hitherto* 6 Rupees, *i. e.*, 5 Rupees salary and one Rupee for rewards, and the cost of any one School, when fairly converted into a Government School, could not be taken at less than 15 Rupees, *i. e.*, 10 Rupees salary and 5 Rupees incidental expenses.

18. The expense of this plan when fully developed seems to the Lieutenant-Governor to be excessive, for the cost of each School when perfect would be Rupees 180 a year. A District of ordinary size contains about 5,000 Villages, and one School to five Villages is a fair allowance. The ultimate expense then in such a District would be Rupees 1,80,000 a year, besides the cost of Model Schools and Inspectors. By the plan recommended the amount for the Village Schools *only* would not exceed Rupees 50,000.

19. It is not the intention of the Lieutenant-Governor to recommend Normal Schools for Teachers as part of this scheme, because he thinks that no Normal School other than a Provincial one for each District would ever supply, to the fullest extent, requisite Teachers for the lower class of Schools. It would be unreasonable to expect any Teacher brought up in a Normal School at Calcutta or Hooghly to proceed to teach Scholars in the Province of Cuttack, or the Division of Dacca, on such a moderate salary as must be assigned to Teachers of Schools in those localities. The Teachers for each District must be furnished in and by the District, and in this view the Lieutenant-Governor thinks it unnecessary to make a District Normal School for Teachers in Village Schools a part of his scheme. For the purely Vernacular Schools contemplated by this project we ought to look to the Model Vernacular Schools proposed to be established. If the support extended to the Native Village Schools should result in success, that success will immediately raise the character of the Schools and of the indigenous Teachers, and will call forth fresh Teachers as a natural consequence, and thus we shall attain our object.

20. The experiment may be tried at any time in some of the populous Districts of Lower Bengal when the money is available. The Lieutenant-Governor thinks that it would be wise to commence not with the most civilized parts of the 24-Pergunnahs, Baraset, or Hooghly, where the cry of the inhabitants is for an English Education as tending to employ and preferment, or, at any rate, not with the portions of those Districts in the vicinity of Calcutta, but rather with more distant Zillahs almost equal in population but not so constantly brought into contact with the advantages of civilization.

21. Considering the new schemes of taxation now being everywhere introduced, the Lieutenant-Governor is opposed to any attempt to impose any

special cess for any Educational purpose. By the present scheme the people pay for the chief cost of Vernacular Schools. The aid to be given by Government may fairly come from the General Revenues.

22. The main features of the scheme now recommended seem to have the merits of simplicity, cheapness, and facility for indefinite extension. Several of them are recommended by the united judgment of experienced Gentlemen of different professions, European and Native. There are difficulties in all plans; but, whatever difficulties there are in this plan, it is believed that they are not more than can be surmounted by the known tact, ability, and earnestness of those to whose hands its execution would be entrusted.

From W. GREY, Esq., Secretary to the Government of India, Home Department, to E. H. LUSHINGTON, Esq., Secretary to the Government of Bengal, dated the 21st September 1861.

WITH reference to the Resolution of the Governor-General in Council, dated the 11th July 1859, by which information was called for on the points connected with Education noticed in the Despatch of the Right Hon'ble the Secretary of State, No. 4 of 1859, and to the several Reports received in reply thereto, I am directed by the Governor-General in Council to request that His Honor the Lieutenant-Governor will cause the Education Budget for Bengal for the year 1862-63 to be prepared upon the basis of the arrangements proposed in the Report submitted by the Government of Bengal for the extension of Educational measures in the Lower Provinces.

2. It is not probable, indeed, that it will be in the power of the Government of India to assign the whole of the amount which may be thus asked for; but when all the Budgets have been received, and the Financial Department shall be in a position to determine what aggregate sum can be allotted to Education in 1862-63, the amount so allotted will then be apportioned among the several Governments and Administrations as may appear to the Governor-General in Council advisable on a careful review of the several Budgets.

3. On some general questions, and questions of principle which are raised by some of the Reports above referred to, the views of the Governor-General in Council will intermediately be communicated, and the ultimate appropriation of the funds allotted to each Local Government or Administration will, of course, be made in accordance with such views; but beyond that the Government of India will be desirous to leave the local assignment of the amount allotted for Education to each Government and Administration entirely in the hands of each Government and Administration.

From J. MONRO, Esq., Officiating Under-Secretary to the Government of Bengal, to the Director of Public Instruction, dated the 1st October 1861.

I AM directed to forward to you the accompanying copy of a letter from the Secretary to the Government of India, in the Home Department, No. 1763, dated the 21st ultimo, together with transcript of one (No. 633) which was addressed to that Officer, under date the 19th of October last, on the subject of popular Education in Bengal, and

to request that, as enjoined by His Excellency in Council, you will be so good as to prepare your Budget for the year 1862-63 upon the basis of the arrangements proposed in the last mentioned communication.

From W. S. ATKINSON, Esq., Director of Public Instruction, to J. D. GORDON, Esq., Junior Secretary to the Government of Bengal,—(dated the 22nd May 1862.)

IN the Budget of this Department for 1862-63, a sum of Rupees 30,000 has been set aside for the purpose of initiating the scheme

recommended by the late Lieutenant-Governor* for the extension of Vernacular

Education in Bengal, and I have now to solicit the orders of Government as to the particular mode in which the funds so appropriated shall be employed. In doing this I must be permitted to offer briefly, for His Honor's consideration, some general explanations and suggestions regarding the working of the proposed measure.

2. Early in last year Mr. Woodrow having informed me that he had in hand a considerable balance belonging to the Reward Fund sanctioned for the old Division of South Bengal, I authorized him to employ this money in making a trial of the projected plan, as far as circumstances would permit, in one or more of the Districts of his Division. He accordingly selected Zillah Burdwan as a part of the country that appeared well suited for the experiment, and he has now submitted a Report, which will be found annexed, detailing the arrangements adopted by him in introducing the new system.

3. His Honor will observe that an important, indeed the *most* important, feature of these arrangements formed no part of the original scheme. It consists in the transfer of a certain number of the Gurus of the Village Schools under improvement, with stipends of Rupees 5 per mensem, to a Normal School, where they are to remain for a year, and receive instruction in their proper duties as Teachers, while Normal School pupils are sent to act as their substitutes in the Village Schools, with salaries of Rupees 12 per mensem—the cost of the arrangement being thus Rupees 17 per mensem for each School.

4. This measure I consider a valuable addition to the proposed scheme, for it supplies at the outset, and in a practical manner, an obvious and acknowledged want for which that scheme makes no provision. It must of course be admitted that no one can impart to others what he does not know himself, and this leads to the irresistible conclusion that any attempt to improve existing indigenous Schools which do not include a provision of some sort for giving instruction to the Gurus must, of necessity, result in failure.

5. The plan which has been tried experimentally by Mr. Woodrow for fulfilling this indispensable condition seems to be alike popular with the Gurus and the Villagers, while it promises to be more effective than any other in supplying to the former the sort of knowledge and skill which they especially need. I propose, therefore, to adopt it generally, as far as circumstances will permit; and, in order to render it still more attractive to the Gurus, I would make them this further offer that, at the end of their year of training, they shall each receive, on examination and approval by the Inspector, a Certificate, carrying with it a stipend of one Rupee per mensem—the Certificate

to continue in force for two years, and to be renewable, from time to time, for the like period of two years so long as the Guru continues in the regular discharge of his duties to the satisfaction of the Inspector.

6. With this addition I am disposed to think that the plan will be very generally successful in most of the Districts of Bengal, and if so, one step at least will have been gained towards the solution of a most serious practical difficulty.

7. The expenditure occasioned by this arrangement will be, for the first year, Rupees 204 for each School, being at the rate of Rupees 17 per mensem. At the end of the year this charge will cease, and the Guru, returning to his School, will simply receive, quarterly or half-yearly, payments in the nature of rewards, which will be proportional in their amount to the attainments of the scholars, as estimated by the Inspector in his periodical examinations.

8. It will be seen that Mr. Woodrow has laid down a graduated scale for determining the amount of the rewards to be given to the Gurus. This scale I am prepared to adopt provisionally. Experience alone can decide how far it will suit existing circumstances. The expenditure for rewards, as determined by this scale, will naturally be small at first; but, as the Schools improve, it will increase from year to year till it reaches some nearly stationary limit not yet assignable, but probably on the average not exceeding the Rupees 30 per School at which it has been estimated. Should it be found that the scale now fixed entails too heavy a charge, it may of course be altered.

9. The allowance proposed for each School being fixed at Rupees 50 per annum, there remains for disposal a sum of Rupees 20 per annum after the stipulated rewards, as now estimated, have been paid to the Gurus. This will perhaps be barely sufficient to defray the cost of a proper proportion of prizes for the children, as well as to provide the stipend of Rupees 12 per annum, which the Guru will draw in right of his Certificate. If additional expenditure is required, it will however be but small, and should not on any case exceed Rupees 10 per annum.

10. The Plan sketched out by the late Lieutenant-Governor contemplates the establishment of six "Model Schools," each costing Rupees 30 per mensem, for every District that furnishes 100 Schools for improvement. These "Model Schools" would, no doubt, be good things in themselves, but I am disposed to doubt their usefulness as "Models." In some Districts where good elementary Schools are scarce, or altogether wanting, it may perhaps be desirable to establish two or three of the class referred to; but generally I am of opinion that it will be a more practically useful plan to substitute, for the six Model Schools, a single Training Institution, consisting of a Model School with a *Normal Class* attached, in which the present and future Gurus of the District may be instructed in their duties under the arrangements indicated above.

11. In a Normal or Training School of this kind, with its connected Model School, great care must be taken to fix the course of study, with special reference to the elementary nature of the work it is required to do. A high standard would be fatal. Still, however, everything should be as perfect in its degree as it is possible to make it. Such an Institution may, I believe, be

maintained in complete efficiency for Rupees 180 per mensem, the sum set aside for the support of the six Model Schools for which I propose to substitute it.

12. It will not, however, be necessary to establish one Normal School of this kind for every hundred of the primary Village Schools to which our operations may extend, so that funds will still be available for the support of a few of the Model Schools in Districts where it is thought they may be useful.

13. As regards the machinery for supervising the Schools now to be brought within the scope of our operations, I would ask authority to appoint Deputy Inspectors from time to time as occasion requires in about the proposed proportion, *viz.*, one Deputy Inspector to twenty-five Schools. They should receive salaries of Rupees 75 per mensem, and be permitted to draw travelling allowances on the same terms as the Deputy Inspectors of the higher grades. These allowances would probably not exceed Rupees 25 per mensem, except in very straggling Districts, so that the total charge for each of these Officers may be estimated at Rupees 100 per mensem, which is the amount set down under this head in the scheme of Sir J. P. Grant.

14. I now revert to the more particular question relating to the disposal of the Rupees 30,000 which have been set aside for carrying out the new School during the current year.

This sum I propose to divide into three portions of Rupees 10,000 each, to be appropriated as follows:—

Rupees 10,000 to the Inspector of Schools, South-West Division, for carrying on and extending the operations commenced by Mr. Woodrow in Zillah Burdwan;

Rupees 10,000 to the Inspector of Schools, Central Division, to commence operations in Zillah Nuddea; and

Rupees 10,000 to the Inspector of Schools, South-East Division, to be employed for the like purpose in Zillah Dacca.

15. These particular Districts in the Central and South-East Divisions have been provisionally fixed upon as being within easy reach of existing Normal Schools, but it will be best to give the Inspectors a discretionary power to select other Districts should they consider it desirable to do so.

16. It is not expedient, nor indeed possible, to lay down at present precise Rules for the specific allotment of the money assigned to each Inspector, but speaking generally the expenditure will be as follows:—

1 Deputy Inspector	Rs. 1,200
Gurus transferred to Normal School, say 35, at Rupees 17 each per mensem, Rupees 595 per mensem=	7,140
Rewards and Contingencies, say	1,660
Rupees	10,000

Each of the three Inspectors, however, should be permitted, if he thinks it desirable, to establish one Model Primary School at a cost not exceeding Rupees 30 per mensem, or Rupees 360 per annum, the requisite funds being obtained by reducing the number of Gurus to be transferred to the Normal Schools.

17. These arrangements will absorb the Rupees 30,000 assigned in the Budget of the current year for bringing into operation the scheme of the late Lieutenant-Governor; but, in order to make proper provision for the extension of the measures now recommended, I beg to solicit that a further grant be sanctioned for the immediate establishment of three Normal Training Schools of the class already described, at a cost, for each, of Rupees 180 per mensem, or Rupees 2,160 per annum. This will involve an expenditure of Rupees 6,480 per annum when the three Institutions are in complete working order, but probably not more than two-thirds of this sum, or say Rupees 4,500, will be required during the present year.

18. It is my intention to recommend, in a separate communication, the establishment of Normal Schools of a superior class at Patna and Cuttack.

From H. Woodrow, Esq., Inspector of Schools, Central Division, to the Director of Public Instruction, dated the 30th April 1862.

I HAVE the honor, in accordance with your directions, to submit, for your information, a brief account of the trial of the scheme proposed by the late Lieutenant-Governor of Bengal for the improvement of Vernacular Schools that has, during the past year, been carried on in the Burdwan District, and to a slight extent in Hooghly and Midnapore.

2. The principle of Sir J. P. Grant's plan is that we must not disregard the kind of instruction which the people have hitherto sought and approved, but, on the contrary, must recognize its utility and try to improve the indigenous Schools where it has been given.

3. The mode of proceeding I adopted in carrying out this scheme was to select some District in which the Schools were most susceptible of improvement, but where the desire for English was not so strong as in the neighbourhood of Calcutta.

I accordingly selected the Burdwan District as the most eligible place, at the present time, for carrying out the scheme, and directed the Deputy Inspector, Baboo Kalidas Moitri, to select thirty Schools for the experiment. At his earnest request I raised the number to thirty-nine.

4. In the directions I sent him for guidance my aim was to give a few plain Rules which the Gurus could easily comprehend.

The following were some of the most important directions.

5. The *inducement* to Gurus to introduce printed books and improved plans of writing will be rewards in solid cash for work done, since Rupees will plead more forcibly than words, if no religious or inveterate prejudices are offended.

6. The *rate* of reward will in no case exceed half what the Guru receives from his pupils. As these receipts are calculated to be about Rupees 5 a month, the total sum allowable in a year for one School will be Rupees 30.

7. The *studies* will be Reading, Writing, and Arithmetic, and when some progress has been made Mensuration, Zemindaree and Mahajumie Accounts, Forms of Agreement, Bonds, Quitances for rent, and Models of letters which inferiors address to superiors. The books selected for this purpose is the second edition of the Patra

Koumadi. (The School Book Society undertook to bring out this book in an improved form, but I regret to say that it has not yet been passed through the Press.)

8. The *veriest* elements of Bengali Grammar, Geography, and History will be sufficient, and even this should not be taken in hand till satisfactory progress is made in the other subjects.

9. The *Returns* will only be made once a year, and will be prepared by the Deputy Inspector from the Attendance Register kept by the Gurus. This is the only Register which the Gurus will be required to keep.

10. The *scale of rewards* to the Gurus will be *nothing* for boys who cannot read, spell, and write at dictation words of three letters, and say the Multiplication Table up to ten times ten.

One pice monthly for every boy who can read and explain the meaning of words and sentences in the 3rd No. of the Infant Teacher, or in some similar book, and who can do Sums in simple Addition, Subtraction, and Multiplication.

One anna monthly for every boy who can read and explain the 4th No. of the Infant Teacher, who can work easy Sums in Mental Arithmetic, and can do, on his slate or on plantain leaves, simple Sums in Compound Addition, Subtraction, and Multiplication.

Two annas monthly for every boy who can read and write without gross blunders, who can work Sums in the Rule of Three, who can copy a Map neatly, who knows the proper Forms of address, and who has made some progress in the knowledge of Zemindaree and Mahajumie Accounts.

Four annas monthly for every boy who completes the highest course prescribed for indigenous Schools.

11. The *time for rewards* will be half-yearly or quarterly, as may be found most convenient, and the amount will generally be determined by the number and progress of boys whom the Inspector examines.

12. The above directions were, I conceived, in strict accordance with the scheme of His Honor the late Lieutenant-Governor. I felt, however, that it was still necessary to set before the Gurus some standard to which they might strive to rise. The order to improve themselves and their Schools would be *imperative* with men who did not know how to set about the work, and could not conceive what a good School was like.

The Marquis of Hastings, in reference to a scheme for Vernacular education somewhat similar to that now under discussion, observed that the Village School Masters could not teach that in which they had themselves never been instructed. I have accordingly selected eleven Gurus, and prevailed on them to study a year at the Normal School, with stipends of Rupees 5 a month each, and placed Normal School Students to officiate for them on salaries of Rupees 12 a month each, together with such fees as they may be able to raise.

This plan is popular, and I could have indefinitely increased the number had there been funds to do so.

13. The expenditure has thus been Rupees 17 a month for each School thus improved, or Rupees 187 in all; but when the year is up the Guru will return and will be paid according to results, and the officiating substitute will go to some other School. The Villagers, seeing what is the proper way of managing a School, will

keep the Guru up to his work, while the Guru himself, from his stay in the Normal School, will have some idea how to fulfil his duties properly.

14. The amount given in Burdwan to the Gurus of the Schools under improvement has been but small.

15. In Midnapore a scale of one pice for every page read by boys able to spell words of four letters has been adopted. There are, as left by Dr. Roer, nineteen Schools under improvement, and the sum paid has, in some cases, exceeded the limit of Rupees 30 a month to each School. It is as well to be liberal at first in order to shew Gurus what may be gained by labor.

16. Besides these payments Books and Maps have been circulated among the Schools, and Prize Books given to the best boys in all the Zillahs.

17. I am of opinion that, to carry out the scheme of Vernacular education successfully, some instruction for the Gurus is absolutely necessary, and I am happy to find that this opinion is supported by the authority of Dr. Marshman in his "Hints for Native Schools." A short epitome of these Hints is given in Marshman's "Life and Times of Carey, Marshman, and Ward," Vol. II., page 119.

Without some plan for teaching the Gurus, whether by their temporary transfer to a Normal School or by the "Circle System," I am afraid that much time and much money will be spent before any decided improvement is made in indigenous Schools.

18. The subjoined account of the expenditure between the 16th March 1861, when I became Inspector, and the 30th April 1862, is forwarded for your information.

From the HON'BLE A. EDEN, Officiating Secretary to the Government of Bengal, to the Director of Public Instruction, dated the 12th July 1862.

I AM directed to acknowledge the receipt of your letter No. 1341, dated the 22nd May last, with enclosure, soliciting the orders of Government as to the particular mode in which the sum of Rupees (30,000) thirty thousand, set aside in the Educational Budget for 1862-63 for the purpose of initiating the scheme for the extension of Vernacular Education in Bengal, recommended by the late Lieutenant-Governor, is to be employed, and suggesting certain modifications and extensions of the original scheme.

2. You now propose, instead of the six Model District Schools which formed part of the original scheme, to establish, in each of the Districts of Nuddea, Burdwan, and Dacca, one Model School, with a Normal Training School attached, for the instruction of the Gurus of indigenous Schools. It is intended that a certain number of the Village Gurus of the District shall be withdrawn from their Schools and placed at this Institution, with stipends of Rupees 5 per mensem, to learn their duty as Teachers, their places being temporarily filled by Normal School pupils on a salary of Rupees 12 per mensem. At the end of the year of training

each Guru will, on returning to his School, receive, on examination and approval by the Inspector, a Certificate carrying with it a stipend of one Rupee per mensem to continue in force for two years, and to be renewable periodically on proof of continued efficiency. In addition to this fixed stipend of Rupees 12 per annum these Village Teachers will, as originally intended, be entitled to rewards which you propose to fix provisionally on the scale recommended by Mr. Woodrow. The total cost of each indigenous School will, under this system, be for the first year Rupees 204 per annum; but after the return of the Guru from the Training School the expenditure will be so far reduced as to bring the whole expenses of each School, including stipends, rewards, and children's prizes, within the fixed limit of Rupees 50 per annum. This plan has, you report, already been tried with great success by Mr. Woodrow, though on a smaller scale.

3. In reply I am desired to inform you that the Lieutenant-Governor agrees with you in thinking that one Training School, such as it is now proposed to establish, is more likely to be useful as a means of improving the indigenous Schools by imparting to the Gurus a knowledge of their business as Teachers, than a larger number of Model Schools, which may or may not be visited by those for whose benefit they are intended as an example. For this reason the Lieutenant-Governor is averse to the establishment of any Model School of this kind, as suggested in paragraph 16 of your letter under reply, especially if it is to limit the number of Gurus who can receive instruction in the Normal Schools.

4. With this exception the Lieutenant-Governor entirely approves of the modified scheme proposed by you, and authorizes its immediate introduction into the Districts of Burdwan, Dacca, and Nuddea.

5. The experiment is one which must be carefully tended and watched by the Inspectors, and fully reported on at the end of the year.

6. The expense of the entire scheme for the current year, the Lieutenant-Governor thinks, will probably be entirely met from the assignment of Rupees (30,000) thirty thousand in the Budget, and if there should be any excess expenditure owing to the establishment of Normal Training Schools, it will not be more than can be defrayed from savings in other directions.

7. In conclusion, I am to observe that no system of popular education can be complete or effective unless provision be made for supplying the people with cheap Books. On this subject I

am directed to refer you to the orders quoted in the margin, copies of which were forwarded to you with the letters of this

Office Nos. 92 and 287, dated, respectively, the 21st February and 17th June 1859, and to request that you will report what means have been, and are being, taken to attain this important object, and what further measures you would suggest for the purpose.



SUPPLEMENT TO The Calcutta Gazette.

WEDNESDAY, JULY 23, 1862.

OFFICIAL PAPERS.

A SUPPLEMENT to the GAZETTE will henceforward be published, weekly or twice a week, according to circumstances, containing such Official Papers and Information as the Government of India may deem to be of interest to the Public, and such as may usefully be made known.

Non-Subscribers to the GAZETTE may receive the SUPPLEMENT separately on a payment of six Rupees per annum if delivered in Calcutta, or twelve Rupees if sent by Post.

No Official Orders or Notifications, the publication of which in the GAZETTE is required by Law, or which it has been customary to publish in the GAZETTE, will be included in the SUPPLEMENT. For such Orders and Notifications the body of the GAZETTE must be looked to as heretofore.

Home Department.

Abstract of the Proceedings of the Governor-General of India, assembled for the purpose of making Laws and Regulations under the provisions of the Act of Parliament 24 and 25 Vic., C. 67.

THE Council met at Government House on Saturday, the 19th July 1862.

PRESENT:

His Excellency the Viceroy and Governor-General of India, *Presiding*,
Major-General the Hon'ble Sir R. Napier, K. C. B.
The Hon'ble H. B. Harington.
The Hon'ble W. Grey.
The Hon'ble C. J. Erskine.
The Hon'ble W. S. Fitzwilliam.
The Hon'ble D. Cowie.

HIGH COURT.

The Hon'ble Mr. HARRINGTON moved for leave to bring in a Bill to provide for the levy of Fees and Stamp Duties in the High Court of Judicature at Fort William in Bengal, and to suspend the operation of certain Sections of Act VIII. of 1859 in the said High Court. He said that the principal object of the Bill, as Hon'ble Members would have observed from the copies of the Bill in their hands, was—firstly, to make temporary provision for the levy of Court Fees in the business coming before that part of the High Court of Judicature, recently established at Calcutta under Her Majesty's Letters Patent, which represented the late Supreme Court of Judicature at Fort William in Bengal, thus continuing for a time the practice in respect to the payment of Fees which obtained in that Court;

and, secondly, for taking Judicial Stamps in accordance with Section XXX. of Act X. of the current year in that part of the High Court which represented the late Court of Sudder Dewanny and Nizamut Adawlut for the Lower Provinces of Bengal.

The Act of Parliament passed last year, under which the Letters Patent constituting a High Court of Judicature at Calcutta were issued, contained a provision for the settlement of Fees to be allowed to the Sheriff, Attorneys, and all Clerks and Officers of the High Court; but it was open to question whether, under this provision, Fees could be levied, which, although paid to Officers of the Court, were not to be allowed to the Officers receiving them, but were intended to be carried to the credit of Government. By an arrangement made between the Government and the late Supreme Court, certain Officers of that Court, who were previously paid by Fees, were remunerated for their services by fixed salaries instead of by Fees, and the Fees received by them were accounted for to Government and formed into a General Fund out of which the salaries of the Officers were paid. It was considered desirable to continue this arrangement, for a time at least, not only as respects certain of the Officers attached to the late Supreme Court who had been appointed to the High Court, pending a revision of the entire ministerial establishment of the Court, but also in regard to other Officers who might be appointed to the High Court while the present Bill remained in force.

In the late Sudder Court for the Lower Provinces of Bengal, Stamp Duties were chargeable under Section XXX. of Act X. of 1862 on all Instruments and writings of the kinds specified as requiring Stamps in Schedule B. annexed to the Act, but Courts established by Royal Charter, which it was unnecessary for him to say was the character of the High Court, as representing both the late Supreme and the late

Sudder Court, were excepted by express words from the operation of the Section, and some provision of law was therefore required to enable the High Court to continue, as a temporary arrangement, to levy Stamp Duties in cases coming before it in which they would have been leviable had they come before the late Sudder Court. Whether it would be right to maintain the distinction contained in this Bill, according to which Court Fees would be taken in some portion of the business coming before the High Court, and Stamp Duties would be charged on other business coming before the Court, or whether a uniform system in the form either of Court Fees or of Stamp Duties should not be introduced throughout the Court, were questions deserving of consideration. The Government would consult the Hon'ble and learned Judges of the High Court on the subject, and on receiving the opinion of the Court they would propose such legislation as might appear proper. One of the reasons for giving a temporary character to the present Bill, which it was proposed should remain in force for a period of only six months, was that these questions might be fully considered before any permanent measure was proposed for adoption. Another reason was, that it was not thought proper to pass any permanent law introducing great and important changes in the practice of the High Court without a previous publication, for the usual period, of the Bill proposing such alterations, and without giving every Hon'ble Member of the Council full time to consider the same. These remarks applied also to the remaining provisions of the Bill as printed.

The first of these provisions proposed to suspend the operation in the High Court of certain Sections of the Code of Civil Procedure, which prescribed, by a series of Rules, the manner in which the judgments and orders of the Courts of Civil Judicature were to be recorded. There could be no doubt that the observance of these Rules imposed considerable labor on the Judges, and were attended with an expenditure of time, which, looking to the very heavy arrears of business pending before the High Court, the Judges of that Court could ill afford to give to the task. The Sections in question were well adapted to, and were very suitable for, the Mofussil Courts. But they were not equally well adapted to the High Court, and there could not be the same necessity for their strict observance in that Court. The Royal Commissioners, who were the original framers of the Code of Civil Procedure, exempted the judgments of the High Court from the operation of these Sections, and the Legislature of this country, which passed the Code into law, never intended that it should apply in its entirety to the High Courts. Indeed he might say that it was always contemplated in this country that a separate Code of Civil Procedure would be prepared for the High Courts whenever they should be established. What was now proposed was that, pending further legislation, the Judges of the High Court should record their judgments and orders in such manner as that Court should, by rules to be framed by them, direct.

The next provision of the Bill related to the appeals which were to be allowed from decisions passed by the High Court, in the exercise of its ordinary original Civil jurisdiction. The only appeals allowed from the decisions of the late

Supreme Court were to Her Majesty in Council. But as the High Court was constituted, decisions passed by a bench consisting of one or more Judges of the Court not being a majority of the full number of Judges, in the exercise of the ordinary original Civil jurisdiction of the Court, would lie to another bench of the Court. Under the Code ninety days would be allowed for preferring such appeals, which was obviously too long a time. In fixing ninety days as the period within which appeals should be preferred to the Sudder Courts, the framers of the Code were obliged to have regard not only to the parts of the country within the jurisdiction of the Sudder Courts in the neighbourhood of the place where the sittings of the Courts were held, but also to the more remote parts, and for such parts the time allowed was not too long. But the appeals coming within the Section of the Bill to which he was now referring would be made in cases arising within the immediate vicinity of the High Court, and as these appeals would be very much in the nature of applications for a new trial, it did not seem necessary that a very long time should be allowed for preferring them. It was proposed to allow the High Court to fix the time by Rule. The rule so framed might probably, with advantage, be embodied in any Bill hereafter introduced to amend the Code of Civil Procedure. Meanwhile, it would be right that the rule adopted by the Court should be published in the *Gazette* for general information.

The next Section was intended for the High Courts which might be established within the next six months at Madras and Bombay. Then followed a Section giving retrospective effect to the Act which seemed necessary in respect to any Fees or Stamp Duties levied since the establishment of the Court on the 1st of the present month.

The concluding Section provided that the Act should remain in force until the 1st January 1863. This would give time for the consideration of any further legislation relating to the High Court, not only on the points mentioned in the Bill, but also on other points in respect of which some legislation might immediately be shown to be necessary.

MR. HARRINGTON went on to say that, since the Bill was printed and circulated, he had been asked to introduce three more Sections. The first related to what were called Warrants of Attorney to confess judgment and cognovits. He was informed there were many such instruments in existence upon which judgments had not yet been signed. They gave power to confess judgment or to allow judgment to go by default only in the late Supreme Court, and a question might arise, and indeed he believed had already arisen, whether this power extended to that part of the High Court which represented the late Supreme Court. The Section was intended to remove all doubt upon the point, and to prevent what would be a fraudulent defence in order to escape from what was taken as a security for money lent, being set up.

The next new Section had reference to the costs of suits decided by the High Court in the exercise of its ordinary original Civil jurisdiction after judgment had been given. By a Section in the Code of Civil Procedure the amount of costs with other particulars was required to be entered

in the decree, and the decree could not be signed by the Court, much less executed, until the costs had been entered in it. But the costs of suits in the late Supreme Court were always taxed by an Officer appointed for the purpose. This often occupied some time, and if the decree could not be enforced until the costs had been taxed, it would give judgment-debtors an opportunity of making away with their property, of which they would not be slow to avail themselves. The Section gave power to the Judges of the High Court on the application of judgment-creditors to enforce decrees passed by the Court in the exercise of its original jurisdiction, with the exception of so much of the decree as related to the costs of suit, although the amount of the costs should not have been ascertained by taxation or entered in the decree.

The remaining new Section related to the legal Practitioners of the High Court. They were of three classes, the Advocates, Pleaders or Vakeels, and the Attorneys-at-Law who might also be Vakeels. By the Code of Civil Procedure many Acts would require to be done by Advocates or Barristers, which in the late Supreme Court were performed by the Attorneys. This would add greatly to the expenses of litigation, and the object of the Section was to allow Attorneys to do all such Acts in the High Court as they had been in the habit of doing in the late Supreme Court. They would continue to appear and act, but would not be allowed to plead.

The motion was put and agreed to.

The Hon'ble Mr. HARRINGTON then applied to His Excellency the President to suspend the rules for the conduct of business, which related to the introduction and passing of a Bill, with a view to enable him to move that the Bill, with the amendments referred to, be passed.

His Excellency the President declared the rules in question to be suspended.

The Hon'ble Mr. HARRINGTON then introduced the Bill, and moved by way of amendment that the three following new Sections be inserted after Section VI. :—

"(1.) Judgment may be signed in the said High Court upon every Warrant of Attorney and *cognovit actionem* upon which a judgment might have been signed in the said late Supreme Court if such Court had not been abolished, and every such judgment may be signed, enrolled, and enforced in and by the said High Court in the same manner, and in the same manner only, as it might have been in the said Supreme Court.

"(2.) Whenever it shall appear necessary to a Judge of the said High Court that a decree made in the exercise of the ordinary original Civil jurisdiction of the said Court ought to be enforced before the amount of the costs incurred in the suit can be ascertained by taxation, the Judge may order that the decree shall be executed forthwith, except as to so much thereof as relates to the costs; and as to so much thereof as relates to the costs, that the same may be executed as soon as the amount thereof shall be ascertained by taxation.

"(3.) Whenever any thing is directed by the said Act VIII. of 1859, to be done by or through a Pleader, the said High Court or any Judge thereof in the exercise of the ordinary original Civil jurisdiction of the said Court may authorize such act to be done by or through an Attorney-at-law of the Court. Provided that no Attorney shall be authorized under the provisions of this

Section to plead in the said Court or in any Division Court for any person."

The Motion was put and agreed to.

The Hon'ble Mr. HARRINGTON then moved that the Bill, as amended, be passed.

The Motion was put and agreed to.

The Council adjourned.

A. G. MACPHERSON,

Offg. Depy. Secy. to the Govt. of India,

Home Department.

CALCUTTA,

The 19th July 1862. }

Government of Bengal.

On the subject of contracting the Government manufacture of Salt.

From W. J. HERACHEL, Esq., Officiating Junior Secretary to the Board of Revenue, to the Officiating Secretary to the Government of Bengal,—(dated the 17th June 1862.)

WITH reference to paragraph 9 of Government Order dated the 7th April last, I have the honor, by direction of the Board of Revenue, to submit herewith a copy of a Minute, dated the 30th idem, from the late Senior Member, Mr. Stainforth, and of one dated the 14th instant from the present Senior Member, Mr. Grote.

2. Mr. Grote, it will be seen, proposes, for the reasons set forth in his Note, to fix a Taidad of nine lacs of maunds of Pungba

Salt for the ensuing season 1862-63 as per margin, and to close the Chittagong Agency altogether. He would not have any Kurkutch gathered in Pooree. Mr. Grote would also reduce the prime cost from 10 annas to 8 annas a maund everywhere.

NOTE BY H. STAINFORTH, ESQ.

IN paragraph 9 of letter No. 208(A.), dated the 7th instant, the Lieutenant-Governor asks when we are likely to have a store of Government Salt equal to one year's consumption.

2. Our Annual Report shews that we had about sixty-nine lacs of Government Salt in store at the end of September last. The Taidad of the present season is forty-four lacs of maunds; and assuming that we manufacture thirty-five

lacs, and that two lacs of Madras Kurkutch will be brought up to Chittagong, we may estimate our stock at the end of next September at 104 lacs, less by the amount sold during the current year.

Unsold balance of Salt on 30th September 1861.

	Mds.	Srs.	Cks.
Hidgellee	9,20,534	29	0
Tumlook	7,90,909	13	15
Chittagong	3,61,210	35	0
Sulkeah	12,76,116	0	0
Wholesale Depôts of Bengal, Total	33,78,810	37	15
Madras Kurkutch at Chittagong	3,31,036	17	0
Orissa Sale and Export Depôts	31,77,070	24	8
Total	68,87,916	30	7

3. The sales of full-taxed Government Salt by the Board, the Agent at Chittagong, and by the Superintendent of Bulloah, during the current Salt year, have been as follows:—

Taidad for 1861-62.		Maunds.	
	Maunds.		
Chittagong	6,00,000	October	14,080
Tumlook	10,00,000	November	2,99,099
Hidgellee	9,50,000	December	34,250
Balasore	8,00,000	January	1,09,026
Cuttack	5,00,000	February	45,901
Pooree	3,50,000	March	3,930
Pungah	42,00,000		
Kurkutch, Pooree	2,00,000		
Total	44,00,000	Total	5,00,286

4. And these sales, with ten lacs of maunds added for retail sales, do not indicate any probability that the sales in the present will exceed those made in the last Salt year, or twenty-five lacs of maunds.

5. We may safely say then that we now have, and shall have at the end of the present Salt year, more Government Salt than is sufficient for a year's consumption of that article.

6. But another very important question is whether we are not under absolute necessity of closing some of the Agencies.

7. The quantity of Salt consumed in Bengal, Behar, and Orissa, of all sorts of Salt in a single year, is about seventy lacs of maunds.

8. To meet this we had of Government Salt in store at the different Depôts nearly fifty-seven lacs of maunds on the 31st of March

last, and there was upwards of twenty-eight lacs of imported Salt, that is to say, we have in hand upwards of eighty-five lacs of Salt, exclusive of thirty-five lacs, the estimated amount to be manufactured of the current season, and thirteen and a half lacs which has been shipped in England and has not arrived, making a grand total of 133½ lacs.

9. These figures seem to dictate to us the necessity of closing at all events some of our Agencies, and it appears to me that at Chittagong, where the Salt is made at a high price, where we always have balances to write off, and from the Aurungs of which much smuggling is believed to be carried on, should be closed from the end of the current season.

10. I would also close the Hidgellee Agency, the Salt of which when brought to Sulkea (whither to be saleable at all it must be brought) is more costly than the Tumlook Salt. It is an additional reason for closing this Agency in preference to that of Tumlook, that much smuggling is supposed to take place from its Aurungs.

11. If any Agency out of Orissa is to be kept open, I would maintain that of Tumlook, the Salt of which is, as noticed, cheaper than that of Hidgellee. Further, the manufacture, which is along the sea coast, not extending more than four miles inwards, is more easily supervised by the Preventive Officers than the manufacture at Hidgellee.

12. In Orissa we must, for the present, manufacture enough for local consumption, no arrangement being made for importing Salt into the Province. I would contract greatly the manufacture in it.

13. In my opinion the total abolition of the manufacture on the part of Government will be most beneficial to it, smuggling from Ships being much more preventible than it is from the Aurungs. The Government will save, too, in Preventive Establishments, if it trusts to importation for the supply of Salt to the people; and land now used for the purposes of the manufacture will yield rent to it. No injury will ensue to the Molunghees from the abolition of the Agencies. There is abundant demand for their labor in consequence of the increase of the prices of production, and that demand will be increased if the Salt lands are given up to cultivation. There seems to me no shadow of danger in leaving the supply of the country to importers, especially when we have the Sambur Lake, other lakes in Central India, the Salt range of Hills in the Punjab, as well as the Ganjam and Chilka Lake sources, with which no maritime enemy can interfere.

14. I may add to this that our Agency at Hidgellee, especially, is a public nuisance. To manufacture Salt we must provide fuel, and this necessitates the maintenance of jungle generating malaria. If the Agency be closed, this evil will be removed by the cultivation of the Julpye lands.

15. There would, moreover, be a saving in Embankments in this Agency, where they are extended and tortuous, in order to allow Salt water to flow over the Salt lands.

H. STAINFORTH.

The 30th April 1862.

NOTE BY A. GROTE, Esq.

Taidads for 1269 (1862-63).

The stock of Government Salt on the 1st ultimo

	Maunds.	
At the Presidency	28,22,608	was fifty-seven lacs of maunds,
At the Agency Ghauts.		stored as per
Tumlook	4,36,675	margin. The
Hidgellee	2,33,767	sales during
Chittagong	2,29,696	the twelve
Cuttack, say	18,00,000	months which
Total	57,66,388	terminated on
Or allowing for wastage	57 lacs.	the 30th April
Wholesale actual	7,63,697	last were for
Retail actual, May to		maunds
March	7,90,861	16,26,424, giving
Estimate for April	71,896	an average
	8,62,727	monthly demand of
Total	16,26,424	maunds
Tumlook	6,50,270	1,35,535.
Hidgellee	8,43,700	
Chittagong	3,17,991	
Balasore	4,83,740	
Cuttack	2,03,267	
Pooree	2,07,797	
Total	27,96,765	

3. The outturn of the manufacture of 1268, which has now been closed, is reported and estimated to be maunds 27,96,765, and is being stored as per margin.

4. The prices for this year have just been notified, and are for Pungah at Sulkea* 3 Rupees per 100 maunds higher than those of last year, and at the Agency Ghauts 4 Rupees lower.

5. The Foreign Salt in the river or in bond on the same date was maunds 31,34,442, being Liverpool twenty-three and three quarter lacs, Bombay and Scinde, &c., seven and a half lacs.

* NOTE.—The Deputy Auditor has made a serious mistake in pricing this Salt, which has just been corrected. In fact, the Sulkea Salt is 15 Rupees higher per 100 maunds than it was last year.

The clearances during the year had been maunds 45,92,704, and the May sales were maunds 3,87,956. There are above 50,099* tons known

* Maunds 13,63,806.

to have been shipped from Liverpool up to March 17th. The market rates, which had been falling from Rupees 395 per 100 maunds on 25th April down to Rupees 379 on the 20th May, have now recovered themselves, and the daily clearances may be expected to maintain throughout the year the proportion which they bore to the Presidency sales of Government Salt in May.

6. For there is a probability that importations will continue so long as freights remain low, and at the same time an improbability of the rates here ranging high enough to bring the Government Salt at Sulkea as now priced into serious competition with imported Salt.

7. Nothing, however, can be more uncertain than the prospects of the Foreign Salt market, as may be gathered from Mr. Bullen's communication to our Secretary, dated the

Copy of Mr. Eden's Note has been sent, I understand, to His Honor the Lieutenant-Governor.

Every year this Salt is entering more largely into the consumption of the country. Last year two-thirds of the seventy lacs, which we are in the habit of reckoning that consumption to be, was supplied by importation. Assuming, as I have above, that the clearances in the course of the current year will be equal to what they were last year, say forty-six lacs, there is already in port and afloat close on forty-five lacs.

8. Whether Government Salt is only temporarily out of the market by reason of its price, or whether imported Salt is beginning to be generally preferred as a superior article, I do not here enquire. Government have only to see that precautions are taken to provide against any abrupt cessation of the supply of Salt to the public, and it has been agreed that it is a sufficient precaution against such a contingency to keep up a stock equal to a year's supply, which shall be always available at cost price.

9. I have shewn above that we have on hand a year's supply of our own manufacture and importation, and more fifty-seven and a half lacs, plus twenty-eight, equal to eighty-five and a half lacs. If the demand on our Golahs should not, during the current year, exceed that of last year, say seventeen lacs, we shall, with our present stocks, be able to meet it, and after supplying all requirements still have sixty-nine lacs, or nearly a year's consumption in reserve.

10. Of the above fifty-seven and a half lacs, however, thirty-two lacs are Kunkutch stored as follows:—

Chittagong	... Maunds	2,43,643
Sulkeah	... ..	14,03,986
Orissa, say	... ..	15,50,000

Total Maunds 31,97,629

11. The manufacture of this kind of Salt, for this year at Pooree up to date, is only 51,089 maunds. The Sulkeah stock goes off very slowly, and is not likely to be purchased except on failure of the stocks of Pungah. The local markets will carry off the stocks in Chittagong and Orissa, the supply in the latter Province being equal to three years' consumption.

12. I propose, therefore, to contract materially our manufacture in the ensuing season, and to close entirely the Chittagong Agency. We have already directed the Agent there to arrange for throwing up the land rented by Government for the Nizampore Aurungs, and we have assented to the Hidgellee Agent's proposal to abandon the Bhogrie Aurungs on the Soobunrekha. What I propose now to do is to concentrate the manufacture of the latter Agency on the Russoolpore River, and that of the Tumlook Agency on the Huldee River. The Salt manufactured on these Aurungs hitherto has not been so good, I understand, as the Salt of the Aurungs further south but though the lands on these river banks are sweeter naturally than those of Beercool and West Mujnah, there are advantages in working them, and a more careful supervision will probably improve the produce. The Russoolpore Golahs have inland communication with Tumlook, which, next to Sulkeah, is our principal and most accessible Store Depot.

13. I should confine the manufacture on these two Rivers to say four lacs, closing all Khalaries north of the Contai and Tumlook Road, and all outlying Khalaries, so as to admit of an effective Preventive Cordon being drawn round the field of manufacture. Smuggling has prevailed, and has been most successfully carried on from the Nurooahmootah and other Aurungs to the north of this road. The opportunity will be a good one for giving effect to the experimental preventive measures recommended by the late Civil Finance Commission.

14. I am inclined to reduce the price again from ten to eight annas for such Salt as may be manufactured in both these Agencies upon advances; but I would endeavor to induce Contractors to come forward and undertake to deliver Salt at our Golahs on certain rates to be agreed on, which should include all transport charges. It is doubtful, I think, whether the change of system will be popular in either Agency, but it will be interesting as an experiment.

15. For so limited a manufacture as I have here proposed in the two Agencies, it will not of course be necessary to retain two Covenanted Agents. One will certainly suffice for the superintendence of the Aurungs on both the above rivers, as well as for the Store Golahs of Russoolpore and Kalinugger in Hidgellee, and Narainpore in Tumlook. The other Hidgellee Golahs will probably be cleared in the course of next year at the price just fixed for Agency Ghaut purchases. After completing the storage for this year they will contain as follows:—

Pooreeghatta	... Maunds	1,53,617
Ramnuggur	... ..	1,66,927
Kishennuggur	... ..	2,10,243

16. Whatever is not likely to be cleared by next February should be brought up to Sulkeah.

17. I prefer working both Agencies partially to closing one of them altogether, for I think it quite possible that next year may shew a very altered state of the Salt market, to meet which it may be necessary to re-equip both Agencies. I do not think that it would be safe yet to look on the present contraction of the manufacture as a step towards its abandonment altogether; but it seems to me that, by watching the Foreign Salt trade, we ought, with our actual stocks, always to be independent of Chittagong. Tumlook, Hidgellee, and Orissa, should, if our arrangements

are timely, supply all our requirements of Pungah Salt. The cheapness of Kurkutch Salt (not however that of the Government importations now for sale at Sulkeah which I find to be much overpriced) may eventually bring it into greater favor, and should this be the case, we may increase our stocks of this Salt by importation, should private enterprise not render our intervention unnecessary.

18. For there is, I find, a noticeable increase in the trade in Kurkutch Salt. Though the sales of our stocks of Chilka and Madras at Sulkeah have been small, totalling only 81,950 maunds, the following Memorandum will shew that there have been increased importations on private account, and larger clearances during the past year over its predecessor:—

	1861-62.			1860-61.		
	Imported Maunds.	Cleared Maunds.		Imported Maunds.	Cleared Maunds.	
	1,29,085	77,655		67,208	53,220	
	6,17,778	5,86,917		4,50,575	4,50,353	
	10,22,467	6,10,197		55,751	5,07,484	
	2,93,929	2,06,705		6,51,230	2,79,946	
	10,871	26,606		2,61,589	...	
	40,833	...		...	...
	2,994	...		...	...
	21,17,957	15,08,080		14,86,353	12,91,003	
Foreign Europe						
Arabian and Persian Gulfs						
North America						
Coast of Malabar						
Coast of Coromandel						
China						
Ceylon						
Mauritius						
Total						

19. This improvement seems to indicate a

Liverpool Pungah	Manuds	73	growing
French Kurkutch from Bond	"	58	taste for this
Madras ditto from ditto	"	45-46	kind of Salt,
Bombay ditto on Bond	"	30	which can
Juddah Kurkutch and Rock	"	60	apparently
Muscet ditto	"	54	be imported

from the Malabar and Coromandel Coasts, and sold at a considerably lower rate than any other Salt. I will quote the rates of private Salt at Hautkholah as they stand to-day. The highest rate of Kurkutch here quoted is below our advertized prices for Sulkeah Salt of the same kind.

20. I lay stress on the tendencies to improve the Kurkutch market, because of this kind of Salt supplies will always be readily available in the event of any threatened interruption of our communications with Europe. The above shews an annual consumption of above fifteen lacs of Kur-

	Mds.	Srs.	Cks.	
Chittagong	1,73,509	22	15	importation, to
Bullooah	17,892	15	0	which has to be
Pooree	3,14,070	13	12	added 81,950
Total	5,05,472	11	11	maunds of Govern-
				ment Kurkutch
				sold at Sulkeah, and

5,05,472 maunds also of Government manufacture, or importation sold by retail in Chittagong, Bullooah, and Pooree. The total consumption of Kurkutch, therefore, in the year was close on twenty-one lacs.

21. I am still without the necessary particulars from Cuttack, and must therefore submit my recommendations without figures for the three Orissa Agencies. I propose to make no Kurkutch Salt next year; the Pooree manufacturers were prepared by the Commissioner at the beginning of the present season for this abandonment. I propose to confine the manufacture of Pungah to five lacs in the three Districts, but cannot assign a Taidad to each District till I have heard the Commissioner's views on the best way of contracting it. I believe it will be found convenient to close the Dhamrah Aurungs of Balasore. I believe, too, that it will be found quite feasible to reduce the rate again from 10 annas to 8 annas. In our letter to the Commissioner we have requested him to concentrate the manufacture as much as possible, with a view to the same preventive precautions that have suggested our propositions for Hidgellee and Tumlook.

22. Our Secretary, I see, has proposed to give a comparatively larger Taidad to Balasore, because the produce of that Agency is a favorite Salt in the market. Were it an object with Government to sell its Salt, this might be an argument for favoring Balasore; but though Government should and must manufacture for sale when the market is unstocked, it should manufacture only for its reserve stock when the market is otherwise well stocked. It was under the impression that Government should take measures calculated to relieve its Depôts that my colleagues lately proposed to Government to abandon its recent policy of equalizing the prices of all its Pungah Salt at Sulkeah and the Agency Ghauts.

23. With the nine lacs which I have proposed to manufacture, equal to about a third of what we have manufactured this year, we shall, if we estimate the sales for the current year at seventeen lacs, have a reserve stock on the 30th April 1863 of seventy-eight lacs. It will then be for consideration to what further extent we may contract our manufacture. The effect, probably, of the contraction here recommended, and of the improved preventive efficiency which should follow, will be to increase materially the consumption of taxed Salt in the manufacturing Districts.

24. It is probable that we shall have to build more Golahs at Narainpore. There will be room, eventually, for ten lacs more of Salt at Sulkeah, but not until the Golahs now stored with Bonded Salt shall have been cleared.

25. I do not think that we ought ever to require again to work the Bhogrie Aurungs of Hidgellee, and would suggest that the lands there

occupied by the Department be given over for cultivation to the Land Revenue Authorities. I would not recommend that any other lands, either in this or the Tumlook Agency, be finally given up, unless in the case of isolated patches, which at present interfere with a direct and economical alignment of the sea embankments which are to be raised in the coming year. The attention of the Public Works Department might be drawn to the opportunity now offered of improving upon the existing alignment.

26. The Secretary has, I see, suggested that the graduating system of Salt manufacture in use in Europe be experimentally tried in one of the Agencies next year. On this point I will note hereafter.

27. Great opposition must of course be expected to the contraction of the manufacture within the limits here proposed. Mr. Buckle has already reported the Hidgellee Molunghees as refusing to believe that Government can even be contemplating a serious reduction of its manufacture. On such objections as these, however, in Hidgellee and Tumlook, I lay no stress. I am not so well acquainted with the condition of the people in Cuttack and Chittagong.

A. GROTE.

The 14th June 1862.

From the HON'BLE, A. EDEN, Officiating Secretary to the Government of Bengal, to the Officiating Junior Secretary to the Board of Revenue,—(dated Fort William, the 30th June 1862.)

I AM directed to acknowledge the receipt of your letter No. 676, dated the 17th instant, forwarding the Minutes of Messrs. Stainforth and Grote on the subject of contracting the manufacture of Salt on account of Government, and closing certain Agencies, either wholly or in part.

2. In reply, I am desired to observe that the stock of Government Salt in store on the 1st May was 57½ lakhs of maunds, and, including the outturn of the season [28 lakhs and two lakhs of Madras Kurkutch Salt for Chittagong, the quantity of Government Salt to be offered for sale during the year will be 87 lakhs, which, with private importations 31,34,442, would make the entire quantity available maunds 1,18,34,442, equal to nearly two years' consumption.

3. The importations, judging from the shipments from Liverpool, are likely to be in excess even of last year. This importation will not improbably continue until the cessation of the American War. On the cessation of that War there will certainly be for a time, at all events, a falling off in importations, arising partly from a demand for Salt for the supply of the Southern States, and partly from the rise in freight, which will follow the re-opening of trade with the Southern Ports. But the Lieutenant-Governor agrees with the Board in thinking that the retention of a stock of Government Salt equal to one year's supply is a sufficient precaution against the contingency of a sudden interruption to the trade in imported Salt. It is clearly shewn in Mr. Grote's Minute that importers are no longer dependent on Liverpool for their supply, in as much as no less than 21,17,959 maunds of Salt have been brought from other than British Ports during the past year.

4. Under these circumstances, the Lieutenant-Governor concurs with the Board in thinking that

it is necessary at once to adopt measures for contracting the Government manufacture during the next season, and he generally agrees with the Board as to the best means of doing this.

5. The Chittagong Agency should be at once closed, the services of Mr. Swinton will be made available for other employment, he should make overcharge of the Agency to Mr. Bruce, the Assistant, who may draw an extra allowance of Rupees 200 per mensem, in consideration of the increased responsibility which thus devolves upon him. Mr. Bruce will conduct the duties of the Salt Agent in immediate subordination to the Commissioner.

6. Mr. Grote's proposal to make two lakhs of maunds of Salt in Hidgellee and Tumlook, respectively, is approved. Mr. Houghton may, for the present, remain in charge of Hidgellee; but as soon as Mr. Buckle can be provided with another appointment, Mr. Cunliffe will be appointed to the united Agency on his present salary.

7. The Lieutenant-Governor sanctions the Taidad of five lakhs of maunds of Pungah Salt for the Orissa Agencies, but no Kurkutch should be made, as the stock at Pooree is very large. As regards the question raised in Mr. Grote's 22nd paragraph, the Lieutenant-Governor is disposed to think that the Taidad of Balasore should be comparatively larger than that of other Agencies. The Balasore Salt is very superior, and there are no difficulties connected with its transport. It is unquestionably cheaper to make good Salt than bad, when the cost of the manufacture is the same, and even when Government manufactures only for a reserve stock, still it is obviously bound to manufacture the best and cheapest Salt it can. The ulterior object of keeping a reserved stock is that it may be available for sale in the event of a deficiency in supply from other sources, and, therefore, good and saleable Salt should be kept in store in preference to inferior Salt.

8. With reference to the reduction of price to the Molunghees, proposed in Mr. Grote's 14th paragraph, the Lieutenant-Governor thinks that two annas is too large a reduction to make at once, and he therefore sanctions the reduction of price to nine annas per maund. If contracts can be made on advantageous terms with parties willing to come forward to make Salt without advances, it would be preferable to the existing system, but it is very doubtful whether it will be found possible to introduce the change proposed in Mr. Grote's 14th paragraph.

9. All Salt remaining unsold in the Hidgellee and Tumlook Agencies in December next should be brought up to Sulkeah if possible; if this cannot be done, increased accommodation will have to be provided at Narainpore.

10. In regard to the Government imported Salt now for sale at Sulkeah, which Mr. Grote says has been over priced, I am desired to request that the Board will explain to what extent, and under what circumstances, a miscalculation of the cost of the Salt in question has been made.

11. The Board will be good enough to state what accommodation is now allotted to Bonders of Salt at Sulkeah, and, whether, with reference to the accommodation provided at Howrah and Ghosery, some of the Bonders might not be served with notice to quit by the 1st of January next, in order to provide accommodation for the large stock of Government Salt.

12. The Salt lands in the Bhogrie Aurungs of the Hidgellee Agency may at once be made over to the Collector for settlement in the Land Revenue Department, and I am to request that the Board will call upon all the Salt Agents for a Report of the lands reserved for the Salt Department, which have now become useless for manufacturing purposes. The Lieutenant-Governor understands that in Hidgellee large tracts are laying waste, no longer fit for Salt manufacture, and yet kept out of cultivation. Every endeavor should be made to concentrate the manufacture as much as possible.

13. As suggested by Mr. Grote, the Department of Public Works will be consulted as to the possibility of improving the alignment of the Sea Embankments.

14. The Lieutenant-Governor will await the Board's further Report on the graduating system

of Salt manufacture as in use in Europe, before sanctioning the experiment proposed by the Controller of Salt Chowkeys and Mr. Bruce.

15. Now that the supply of Salt to this country is left so much to private enterprise, it is absolutely necessary that those engaged in the trade should be furnished with accurate information of the stocks in the market. A Statement which purposed to give this information is, it is true, published bi-monthly in the *Government Gazette*, but in its present form it is calculated to mislead rather than to guide the Merchants. It apparently only comprises Salt advertized for sale at Sulkeah or the Agencies, but, in the opinion of the Lieutenant-Governor, it should give the total stock of Government Salt of all sorts unsold at all Depôts, including Chittagong and Orissa. To make it more complete the private Salt in bond and on boardship in Port might also be given separately.

Government of Bengal, Public Works Department.

Comparative Statement of Temperature at Parisnath and Raneegunge.

MEMORANDUM.

THE following is an Abstract of daily observations of the Temperature at Raneegunge and at Parisnath from May 1861 to April 1862. The observations at both places having been made within doors.

Height of Raneegunge above the Sea ... 376 feet.
Ditto of Parisnath " " " ... 4,330 "

An Abstract of the observations made during the previous year will be found in Vol. XXXVIII. of the Selection from the Records of the Bengal Government.

MONTHS.	MEAN MONTHLY OBSERVATIONS TAKEN ON PARISNATH HILL.						MEAN MONTHLY OBSERVATIONS TAKEN AT RANEEGUNGE.				
	At Sun rise.	At 9 A. M.	At Noon.	At 3 P. M.	At Sun set.	Mean Temperature of the month.	At Sun rise.	At 9 A. M.	At 3 P. M.	At 10 P. M.	Mean Temperature of the month.
May 1861	72° 71	77° 70	80° 9	78° 6	74°	76° 78	80° 84	87° 80	96° 4	81° 40	86° 61
June "	69° 26	69° 93	70° 40	69° 86	69° 66	69° 82	80° 63	86° 08	88° 05	81° 5	84° 06
July "	68° 73	69°	70°	70°	69° 16	69° 37	78° 64	84° 09	86° 51	80° 42	82° 41
August "	68° 8	69° 8	70° 8	71°	70°	70° 08	79° 5	85° 2	90° 6	79° 8	83° 77
September "	67° 96	69° 46	71°	71°	69° 69	69° 82	79° 7	84° 46	89° 73	80° 16	83° 51
October "	63° 30	65° 03	66° 13	66° 23	65° 43	65° 22	74° 74	81°	85° 38	81° 32	80° 61
November "	55° 55	58° 48	60° 55	59° 58	58° 51	58° 53	62° 8	74° 33	81° 37	68° 93	71° 85
December "	49° 83	53° 76	56° 28	56° 43	54° 23	54° 10	56° 64	64° 8	77° 1	66° 37	66° 23
January 1862	47° 89	52° 22	57° 22	55° 43	51° 93	52° 94	57°	67° 64	76° 03	60° 03	65° 17
February "	55° 66	61° 96	64° 74	65° 37	62° 55	62° 05	62° 10	73° 39	84° 34	69° 59	72° 35
March "	57° 51	66° 40	70° 14	69° 26	63° 40	65° 34	72° 96	80° 96	88° 58	74° 06	79° 14
April "	69° 80	73° 5	79° 56	79° 7	74° 7	75° 45	80° 13	86° 14	95° 79	80° 73	85° 69

J. P. BEADLE, *Lieut.-Colonel, R. E.,*

*Offg. Secy. to the Govt. of Bengal,
in the P. W. Dept.*

Abstract Register of Temperature on Parimath for the year 1861-62.

MONTHS.	AT SUN RISE.			AT 9 A. M.			NOON.			AT 3 P. M.			AT SUN SET.		
	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.	Highest.	Lowest.	Mean.
May 1861	79°	65°	72°·71	85°	70°	77°·7	88°	71°	80°·9	87°	66°	78°·6	85°	69°	74°
June "	71°	68°	69°·26	73°	66°	69°·93	75°	66°	70°·40	73°	66°	69°·86	71°	66°	69°·66
July "	70°	66°	68°·73	72°	68°	69°	75°	68°	70°	75°	68°	70°	71°	65°	69°·16
August "	71°	65°	68°·8	72°	67°	69°·8	73°	68°	70°·8	75°	68°	71°	72°	68°	70°
September "	69°	66°	67°·96	72°	67°	69°·46	76°	67°	71°	78°	66°	71°	75°	66°	69°·69
October "	67°	58°	63°·3	67°	63°	65°·03	70°	63°	66°·13	69°	63°	66°·23	69°	63°	65°·43
November "	63°	48°	55°·55	66°	52°	58°·48	68°	57°	60°·55	65°	54°	59°·58	63°	53°	58°·51
December "	57°	46°	49°·83	62°	47°	53°·76	64°	51°	56°·26	65°	51°	56°·43	62°	50°	54°·23
January 1862	53°	44°	47°·89	58°	47°	52°·22	63°	54°	57°·22	63°	49°	55°·43	54°	48°	51°·93
February "	65°	47°	55°·66	70°	58°	61°·96	75°	59°	64°·74	71°	62°	65°·37	69°	60°	62°·55
March "	60°	49°	57°·51	72°	53°	66°·40	79°	59°	70°·14	79°	58°	69°·26	72°	55°	63°·40
April "	75°	66°	69°·80	80°	70°	73°·50	84°	72°	79°·56	86°	73°	79°·7	80°	70°	74°·7